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PAPER TRADE JOURNAL

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MAY 24 1927

Don't wreck your Expensive Fourdrinier

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Removable (BELOIT PATENT) FOURDRINIER

It completely eliminates damage to rolls or bearings; grease or oil on wires and crimped wires. Bulletin No. 9 tells why. Ask for it.

Beloit Iron Works — **Beloit, Wis., U.S.A.**

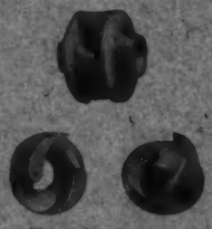
Since 1858 Builders of Paper, Board Mill and Container Plant Machinery

Fairbanks-Morse six-inch Horizontal Type Pump, direct-connected to 25-hp. F-M Ball-bearing motor handling paper stock at plant of Bogalusa Paper Co., Bogalusa, La. This is one of four stock pumps used in the Bogalusa plant—all driven by F-M Motors.

"No other pump like it for handling *stock*"

That is the verdict of users wherever the Fairbanks-Morse Stock Pump (A. B. Wood's Patent) is installed. And the statement holds true of both the performance and design of this unique pump.

Although the pump is highly perfected in every detail, its unmatched ability to pump solids in suspension is primarily a result of the patented impeller design illustrated opposite. Note that this impeller has no sharp edges or corners to catch materials. Moreover, it is the enclosed type so that material does not come in contact with stationary side plates as it does in the ordinary pump, but is promptly discharged through the large ports into the pump case.



View of unique impeller used in F-M Stock Pump; also shown cut through center to show design details.

In actual operation this pump is able to handle spherical solids one pipe size smaller than the suction. It has also demonstrated its ability to handle fibrous or stringy material, such as paper stock, without clogging. This is typified by the installation illustrated above.

The stock pump is built in sizes suitable for paper and pulp mill requirements. Consult our nearest branch for specific recommendations.

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PAPER TRADE JOURNAL
ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-FIFTH YEAR

Published Every Thursday by the
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TABLE OF CONTENTS

Copyright 1927 by Lockwood Trade Journal Co., Inc.

Deerfield Glassine Co. Buys Mill 19
Changes at Cushnoc Paper Co. 19
Demand Falls Off in Philadelphia 20
R. T. Moorehouse Mill For Sale 20
Tri-State Paper Co. Incorporates 21
To Install Cylinder at Aroostook Mill 21
News Print Price Cut Denied 22
Kraft Situation Worries Chicago 24
Chicago Merchants Discuss Situation 24
Fox River Valley Developments 26
Boston Paper Trade To Meet in June 26
Boston Paper Demand Fair 28
Canadian Mills Want Expert Appraiser 30
Cheap Power 32
O. B. Andrews To Open in Cincinnati 34
To Unionize Entire Holyoke Industry 34
Construction News 36
New Companies 36
Obituary **38**
New York Trade Jottings 40
Paper and Paper Stock Imports 42
Editorial **46**
News Print Production for April 47
Activities of the Brotherhood 47
Technical Section
Deterioration of Rag and Sulphite Papers 49
De-Inking News Print Papers 50
Modern Drive for Board Machines 51
Care and Application of Felts 52
What Is the Cause of Creases? 53
Summer Courses in Pulp and Paper 54
American-Scandinavian Interchange 54
Meters for Paper Mills 55
Current Paper Trade Literature 56
Cost Section **59**
Trademark Department 64
Imports of Paper and Paper Stock 66
New York Market Review **70**
Miscellaneous Markets **72**
Market Quotations **74**

The PAPER TRADE JOURNAL is indexed in The Industrial Arts Index

Want and For Sale Advertisements 81, 82, 83. 84, 85

5 DAYS *instead of* five weeks

ONE OF THE TRAVELING SALESMEN for a large Milwaukee dry goods house was suddenly forced to cancel his regular trip because of a broken leg. In the emergency he decided to try Long Distance. From his sick-room he covered in five days by telephone the same territory that normally required five or six weeks of traveling. On checking up he found he had gathered in by Long Distance 90% of his usual business!

MORE AND MORE BUSINESS HOUSES are using the telephone over states and over the nation as they formerly used it to nearby towns. A long distance call appeals to the busy buyer. It commands the ear of those who would hesitate to see the salesman personally for fear needless time would be consumed. Long Distance calls are for the busy buyer or seller who must cut expense and make the most of time.

The telephone is the economical, dependable means with which almost any concern can reach any distance for business. There is hardly any limit to what the man can do who travels by telephone. His hours go further. Every day, just as in an emergency, the telephone on your desk will reach distant cities and states as surely and effectively as it connects you with the other side of town. What far-away man or concern would you like to call now? You'll be surprised how little it will cost. . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

The Magazine of the Paper Industry

Vol. LXXXIV. No. 20 Thursday, May 19, 1927

Deerfield Glassine Co. Buys Monroe Bridge Mill

New Company is Installing Special Equipment for the Manufacture of High Grade Glassine Papers and Expects To Begin Operation About Sept. 1—Plant Will Have Two Fourdriniers, One 80 and 136 Inches Wide With a Total Capacity of 18 Tons Per Day—Joseph H. Wallace, Well-Known Paper Mill Engineer, Heads New Concern

The Deerfield Glassine Company has acquired the paper plant and village at Monroe Bridge, on the Deerfield River, in the Berkshire Mountain section of Massachusetts, and is engaged in the installation of special equipment required for the manufacture of high grade glassine papers. The company anticipates being in operation about September 1.

Paper has been manufactured at this location for 40 years, the original mill having been established by the James Ramage Paper Company about 1886. In 1921 the present fine brick and concrete modern mill buildings were completed, and a 136 inch Pusey & Jones Fourdrinier machine was installed for the manufacture of kraft papers from the sulphate pulp produced at the company's pulp mill at Wilmington, Vt., a few miles up the river. Operations at the pulp mill were terminated as a result of the New England Power Company purchasing this property as an incident to its development of water power on the Deerfield River. The paper mill property was then acquired by William G. Shortess and his associates, and has now been purchased by the present company, which selected it after an examination of a great number of similar properties for the production of glassine paper. The company's property comprises over 60 acres.

The Hoosick Tunnel & Wilmington R. R. affords connection with the Boston & Maine R. R. line at Hoosick Tunnel station, 6 miles from the mill.

The mill buildings are of the most modern type of high class brick, steel and concrete construction, and house two paper machines and all equipment, such as beaters, calenders, finishing equipment power and electrical machinery and their auxiliary apparatus, required for the operations on glassine paper.

The No. 1 machine is a Pusey & Jones Fourdrinier, with 136 inch wire, 3 presses, 29 driers. Pusey & Jones have another contract for adding to this machine all of the latest improvements for the manufacture of glassine paper.

The No. 2 machine, with an 80 inch wire, was rebuilt in 1923, and a new Fourdrinier part put on. Improvements will be installed, adapting it to the production of certain high grade specialties, particularly light weight glassine papers.

The combined capacity of these machines will be 18 tons per day, and the No. 1 machine is one of the largest glassine producing units in the country.

The operations start with the advantages of nearness to raw material sources, an unexcelled supply of pure cold water, essential to this type of paper making, a favorable contract for hydro-electric power, and an ample facility for housing skilled and common labor.

High grade paper making on the North American Continent has had its home in western Massachusetts, and skilled labor in this class is available; in addition to which the location is close to the best markets for glassine papers.

The directors of the company are: Joseph H. Wallace, president and general manager; William G. Shortess, vice president; William L. Ross, treasurer; Frank E. Greenwood, secretary and production manager; Edward J. Costigan.

Messrs. Wallace and Greenwood have been associated for 25 years as Joseph H. Wallace & Co., paper mill engineers, New York City.

Mr. Shortess, a well known paper manufacturer, is president of the Federal Paper Board Company, Bogota, N. J., and of Inland Paper Company, Versailles, Conn.

Messrs. Ross and Costigan are investment bankers, well known in industrial fields of development.

Changes at Cushnoc Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

AUGUSTA, Me., May 16, 1927.—Announcement was made last week of a number of important changes in personnel at the Cushnoc Paper Company. Alton W. Blaisdell, superintendent for the last five years, has resigned and William H. Toppan has been appointed to succeed him. Mr. Blaisdell has been with the company for the last 10 or 12 years. Mr. Toppan, the new superintendent, has been with the company for about three years. Previous to his affiliation with the Cushnoc Company, he was manager of the Cone Bag Company, of Madison, for three years, and was also connected with the Great Northern Paper Company, of Millinocket, as assistant in the Bureau of Economy. He is a graduate of the Massachusetts Institute of Technology in the class of 1908.

George E. Harmon, master mechanic, has also resigned and Fred M. Spearin has been appointed to succeed him temporarily. Both are veteran employees of the company. Mr. Harmon has been with the company about 24 years and Mr. Spearin a few years longer. Mr. Harmon has been master mechanic for the last 15 or 16 years. He was previously with the International Paper Company at Livermore Falls and with the Dalton Paper Company, now the Gilman Paper Company, of Gilman, Vt. A third change is the appointment of Frank Silver in charge of the paper machines, succeeding Philip S. Day.

Demand for Paper Falls Off in Philadelphia

Hand to Mouth Purchases Predominate in Fine Paper Industry—Local Manufacturers Adopt Cautious Attitude Regarding Prevailing Situation—Coarse Paper Market in Excellent Position, With Quotations Holding Up to Schedule

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., May 16, 1927.—There have been a fairly satisfactory amount of orders for the few dealers who have been enjoying the bulk of the business reported, but the majority of houses report a quieter trend with the advancing spring. Those distributors who have been less active are among the firms that have been added to the industry within recent years. The old timers in the coarse paper business in the Quaker City, with a wide following of consumers among the larger commercial and manufacturing enterprises in this location are the most prosperous in this late season. Prices on the majority of the grades of fine papers are held firmly, the only uncertainty being in the M. F. lines, while the coarse paper market shows the most stabilized condition that has existed at this season in many years.

Fine Papers Quiet

As the summer season approaches, the fine paper market has been gradually assuming a quieter trend. There has been a duller tendency ever since the current month began. As the demand for printed matter wanes the paper industry and its fine paper branch reflect the hand to mouth buying which such a condition dictates. The larger publishers, too, are not buying in the volume which might be expected and order only as the needs occur.

Mills Assume Cautious Attitude

As the needs of the distributors become a matter of hand to mouth type, the manufacturers in the State and immediate vicinity have taken on an attitude of cautiousness which is on a parity with demand. The local mills have been producing only as the orders come in and are not stocking ahead to any extent as in former years. Orders are confined to the immediate future requirements of the paper dealers and show that the distributors are not looking ahead in the matter of stocking.

Firmness of Wrapping Papers Apparent

That the wrapping paper division of the industry is more firmly established is apparent by the steady prices, although demand shows a quieter trend. A few mills involved in the extra charge which was effected in the price of cut sheets of wrapping paper about six months ago have been making concessions within recent days by elimination of this cutting fee. This is particularly true in the case of sheets of kraft and some of the fiber wrappings. While a few mills are not enforcing this trade custom, others continue to hold to the extra charge. Butchers' fibers remain unchanged and firm. Parchments hold to the lower prices established in the early winter. Paper boards are being purchased in hand to mouth quantities and not in the larger tonnage orders that usually appear at this season and as in the summer competitive bidding for business.

Glen Mills To Be Auctioned

With the sale of the historically interesting Glen Mills there will be disposed of one of the earliest paper manufacturing plants in this country. The Glen Mills will be offered for sale by the Samuel T. Freeman Company, 18th and Chestnut streets, auctioneers in this city, upon authorization of the Diamond State Fibre Company, on May 23.

The Glen Mills, long known as the Ivy Mills, or Wilcox Mills, enjoy a history in paper making in this country which dates back to the days of the Revolution and were the mills to produce the first bank note paper used for money making by the United States Government. While the present Glen Mills is the last of the group of the old Ivy or Wilcox Mills it has within recent years been thoroughly modernized to meet modern paper making requirements and has an up-to-date equipment which has been devoted to production of the various grades of papers produced within its walls in recent times and under several ownerships.

The equipment, which will be offered at auction along with the paper making machinery on the premises of the mill at Glen Mills, Pa., just outside Philadelphia, on Monday, May 23, at 11 a. m., consists of the following units and furnishings in accessories and appliances: 1 Pusey and Jones straight fourdrinier paper machine, 76 inches by 40 feet wire with Downingtown Keystone 12 x 42 inches lock screen press and with 17 cylinder double deck drier 36 x 72 inches; Moore and White, 72 inches cutter; Moore and White double deck 4 cylinder drier; 2 Smith and Winchester jordan engines; 2,000 pounds beater; 2 Downingtown washers; Pusey and Jones press with rolls; Ames Tandem compound engine, 300 h.p.; Atlas steam engine, Corliss type, 80 h.p.; 3 Heine water tube boilers, with blower system; Rolland and Oakes magnetic roll; 2,000 pounds Howe floor scales; Saveall waste tanks; label and die presses; drill press; Cahien hoist; electric motors; 50,000 pounds new and used steam and water pipes; 2 Daniels No. 2 rag cutters; drier felts; valves and pipes; work benches; sizers; belting and office furnishings.

Much of this equipment was installed under the recent ownership of the Diamond State Fibre Company, who took over the mills about two years ago. Just before the mills were acquired by the Diamond State Company they were operated by a wrapping paper concern. In the early days of the mills fine paper and engraving papers were the products produced.

R. T. Moorehouse Paper Co. Mills For Sale

Another landmark in the Philadelphia paper manufacturing industry which is now on the market and announced for sale, is the R. T. Moorehouse Paper Company's mills located at 2655 Bridge street. The present proprietors of the mills, Robert T. Moorehouse, has decided to dispose of the property and the mill equipment through sale. These mills were pioneers in the manufacture of book paper from waste materials known as Bridesburg book papers and were the first to produce these grades in this country. The first owners, Moorehouse Brothers, began the production of book papers in 1858. At that time the firm was controlled by Robert O. Moorehouse and Walter Moorehouse. In 1897, the present proprietor, Robert T. Moorehouse, son of Robert O. Moorehouse, became head of the firm. Within recent years the mills have been modernized with three fourdriniers in operation, producing a line of printing papers, book papers, wrapping papers and news print. In addition to the machinery many new units in power and other equipment have been added to give adequate facilities with the improvements in paper machinery.

Paper Men To Attend Box Makers Convention

Philadelphia paper dealers catering to the paper box manufacturing industry will journey to Chicago in the current week to attend the annual convention of the National Paper Box Manufacturers' Association, to be held at the Palmer House, May 18, 19 and 20. A few of the local dealers will be featured in exhibits at the hotel. Among those who will journey to the Western Metropolis are Walter H. Matthias, Charles Matthias and W. W. Daniels, of the Matthias and Freeman Company; Charles Beck, of the Charles Beck Machine Company and Charles Beck Paper Company; F. E. Doetcher, Louis DeJonge Company; W. S. Welsh, Welsh Paper Company; John Datz, A. S. Datz & Son; and repre-

sentatives of the A. M. Collins Manufacturing Company, Container Corporation of America, A. Hartung, Inc., and Pinco Papers, Camden, N. J.

Elmer Renner With Reading Glazed Paper Co.

Elmer Renner, who for many years was associated with the Philadelphia headquarters of the Charles W. William Company, distributors and manufacturers of box makers paper, and who recently joined the Reading Paper Mills, has sent an announcement to the paper trade informing it of his new address. While Mr. Renner, who was manager of the local offices of the Williams company, will travel the nation for the new affiliation he will conduct his Philadelphia business at 5620 North Mascher street, where he will receive orders for the various lines of glazed papers manufactured by the Reading Glazed Paper Company, of Reading, Pa.

A. N. Waring To Represent New Lines

Arthur N. Waring, for many years identified with the Philadelphia paper trade, is now representing the Port Huron Sulphite and Paper Company, of Port Huron, Mich., manufacturers of high grade sulphite wrappings. For many years he has been traveling as representative of other manufacturers whom he will continue to represent in this field. About 23 years ago he was engaged in the paper distribution business in this city as head of his own jobbing house, the Pennsylvania Paper Company, and has a wide circle of friends hereabouts. He will include the Port Huron Company's sulphite wrappings among the locally represented products.

Penn Card & Paper Co. Adds Cutting Service

A new service in cutting has been added to the Penn Card and Paper Company's paper business. There has been installed complete equipment for cutting cards and papers and sheeting with a department devoted to this service for the consuming industries. The equipment consists of Seybold cutters, Robinson rotary cutter, and the Charles Beck Machine Company sheeting machines, which have been equipped with the curl removing attachment. The new department will be in charge of Frank Soda.

Endura Products Co. Acquires Mills

The Endura Manufacturing Company, which has been specializing in the production and sale of automobile papers used in the finishing of autos, has taken over the mills of the Durham Paper Company, at Durham, Pa. The executive offices of the Endura Company are located at 11th and Washington avenue, in this city. With the acquisition of the Durham mills the company will branch out into new fields of paper production, specializing in leather substitutes and specially strong papers that can be used for many purposes. The company is expending considerable capital in the modernizing and re-equipment of the mills with installations of new units and machinery for the manufacture of its specialties. Besides the papers used by the automobile manufacturing industry for finishing purposes there will be produced leather substitutes; paper used by the silk mills; base papers for photo mounts; wallet papers; filing envelope papers in red rope, and many other grades that now are in process of development in its laboratories. These are sold to the larger converters and to the paper distributors. The company is incorporated and has been engaged in business in this city for several years. Its officers are: President, R. E. Scherr; vice president, McCafferty, and secretary and treasurer, A. K. McCallagh.

Tri-State Paper Co. Incorporates

INDIANAPOLIS, Ind., May 16, 1927.—The Tri-State Paper Company, 123 South First street, Evansville, Ind., has filed certificates of dissolution with Frederick E. Schortemeier, secretary of state of Indiana, according to Isadore Silverman, president. The company will be reorganized as the Pro-Tex-All Sanitary Products Company. The new organization will be incorporated for $25,000 and the officers will be I. Silverman, president and treasurer; E. W. Silverman, vice president, and S. Weiner, secretary.

R. S. Kellogg Speaks to Forestry Students

ITHACA, N. Y., May 18, 1927.—"The profession of forestry is not an easy one," said R. S. Kellogg, secretary of the News Print Service Bureau of New York, speaking to the Forestry students at Cornell University today. "The work is hard, the service long, and the reward small—in money. A forester must be honest. He cannot cheat nature. He must have courage and patience to meet new problems at every turn and uncommon sense to adjust classroom theory to the infinite variety of nature. He is, however, fortunate in his training in the scientific spirit, in his understanding contacts with nature, and in the constant necessity for keeping his feet on the ground. His reward comes in his ever-increasing enjoyment of the outdoor life, in the satisfaction of constructive effort, and in the knowledge that he is doing his share in contributing to good citizenship. There is need for forestry and yet more forestry. In spite of the big steps that have been taken in educating and enlightening the public, its mind is still a mixture of too much exaggeration, too much sentiment and too little economic sense.

"You have had four years of work and fun in college. When you get out forget your sheepskin, roll up your sleeves, spit on your hands and tackle any honest job that is headed right. Keep an open mind and face the facts. Don't get stale. Progress comes from doing the impossible. Don't forget that there is no such thing as men being 'created equal,' except in the spread-eagle speech of the Fourth of July orator. The one inalienable right is that of opportunity. There will never be equality of accomplishment and reward. There are too many slogans nowadays, too much talk and too little thought. Wooden legs are not inherited but wooden heads are. Beware of any man who undertakes to set limits to human capacities, for the driving force of a human personality is the greatest thing in the world. Any dead sucker will float downstream, but it takes a good fish to go up the rapids."

Forestry Students To Train at Pack Forest

[FROM OUR REGULAR CORRESPONDENT]

WARRENSBURG, N. Y., May 16, 1927.—Pack Forest, located three and one-half miles north of this village, is being prepared for the reception of students of the State College of Forestry, who will train there during the summer. The Pack Forest contains 2,250 acres of valuable forest land and was presented to Syracuse University by Charles Lathrop Pack, president of the American Tree Association, for the use of the State College of Forestry. It is proposed to establish a field station on the large tract and to make the Pack Forest one of the show places of the Adirondacks.

Plans for developing the tract as an experimental station of the State College of Forestry were disclosed early this week when Attorney Harry E. Reoux, appearing before the Public Service Commission in opposition to the proposal of the Hudson Valley Railway Company for abandonment of the Lake George-Warrensburg line, said that discontinuance of the railway service would seriously affect the success of the Pack Forest. It is proposed to have the experimental station open to visitors during the summer to show what is being done in reforestation work and without the railway service visitors will be handicapped.

To Install Cylinder at Aroostook Mill

GARDINER, Me., May 16, 1927.—The so-called Aroostook mill of the Hollingsworth & Whitney Paper Company, which has been operating intermittently for a long period, has shut down after a run of three weeks, for the installation of a cylinder machine in place of the present Fourdrinier machine. The new machine will produce a heavier grade of paper, a kind for which the company has been receiving more orders. It is the hope of the mill officials that, this change completed, the mill can be operated steadily. The company's other mill here has one machine of each type. It is probable that the Aroostook mill will resume operations about June 1.

News Print Price Cut Rumor Contradicted

Leading Publishers Have Already Contracted for Current Year's Requirements at $65 Per Ton, the Scheduled Quotation—John H. Price, President of Price Bros. & Co., Takes Hopeful View of Situation—Importance of New Sales Merger

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., May 16, 1927.—Strenuous denial has been made from "authoritative sources" of the rumor in a news item from New York that a cut of $5 per ton in news print prices is imminent. No consideration, it is stated, has been given to any suggested cut in price; nor will such consideration be given, as the leading companies have already contracted for their output for the current year at $65 per ton. On the other hand it is admitted that some of the smaller mills in New York State who invariably cut the price in order to get rid of their stock, may have quoted news print at $60 per ton, and it is further admitted that some mills in Canada may hold contracts only until July 1. In any case, mills here are running at 85 per cent capacity, and news print stocks are a drug in the market. This is due to over-expansion of the industry. Speaking on the subject at the annual meeting of Price Brothers & Company during the past week, John H. Price, the president, took a hopeful view. He said:

Mr. Price's Views

"For some years now the news print industry has experienced an era of prosperity, an ever increasing demand for news print paper mills running to full capacity with good profits. These conditions brought in their wake the natural tendency for the industry to expand. Capital was eagerly offered, both to established organizations and to new ventures, with the result that is facing us today—over-expansion. This over-expansion, I consider, to be temporary.

"The period of depression thus brought about may be measured by the ability of the industry as a whole to face the new conditions and to find ways and means to better regulate supply and demand. A slight slackening in the feverish haste to construct new mills alone would ease the situation considerably as regards over-production, while more intelligent methods of competition in supply would assist in equal measure in establishing fair prices. I am happy to say that definite steps are now being taken in this direction by the continued efforts of the principal companies in the country, and to the results of these efforts I look forward with confidence."

Review of Paper Industry's History

C. de Wolfe Reid, who is well known in the pulp and paper trade circles in Canada, speaking at a Kiwanis luncheon in Montreal during the week, dealt with the growth and development of the paper industry in Canada from its small beginning nearly a hundred years ago to its present pre-eminent position among the industries of Canada. He told how the first paper mill was established at St. Andrew's East in 1803, by James Brown, who a few years later owned the *Montreal Gazette*, when it was a weekly paper, and secured his news print from the mill he had established earlier.

Other mills were soon established, one where Greenville now stands in Ontario, where the owner received a bounty of £100 for producing the first paper made in Ontario. Later mills were established at Valleyfield, and from this grew the industry as it is known today. In 1857 the Riordons started in the business at Brantford, Ont., and in 1863, several of the Riordon brothers were associated in trade on the Welland Canal, in a small mill, whose capacity was one and one-half tons a day. Mr. Reid contrasted this output with the present capacity of some mills, which turn out 1,000 tons of news print a day.

The making of ground wood pulp was started in 1870, and in 1877 the sulphite process was brought to Canada. From that time onward the business expanded rapidly. Mr. Reid traced the establishment of other mills and processes for making pulp and closed with statistics to show just how great the development has been.

In 1890, he said, the total exports of paper from Canada amounted to $120. In 1910, twenty years later, the value of exports had increased to $10,000,000, and in 1926 to $173,491,635. In 1900 there were only 25 manufacturing establishments, employing 3,300 people; in 1925 the invested capital was $500,000,000, the production $250,000,000, and the number of people employed 30,000. In all, the speaker added, the exports now represent 17½ per cent of the total exports of Canada.

Controlling Timber Output

According to a despatch from Vancouver, a merger of 65 leading lumber companies of the Pacific Coast into one gigantic concern, negotiations for which have been under way for more than a year, "is now within sight of realization." It is stated that coast logging and milling companies whose capitalization exceeds $100,000,000, have signed a memorandum agreeing to enter the merger, the purpose of which is stated by the negotiators to be "such a control of production and elimination of overhead as will enable the industry to function profitably." For a long time past the lumber industry in British Columbia has been on a non-remunerative basis, despite the fact that even in Eastern Canada British Columbia lumber competes successfully with the production from Eastern mills.

P. B. Wilson To Manage News Print Merger

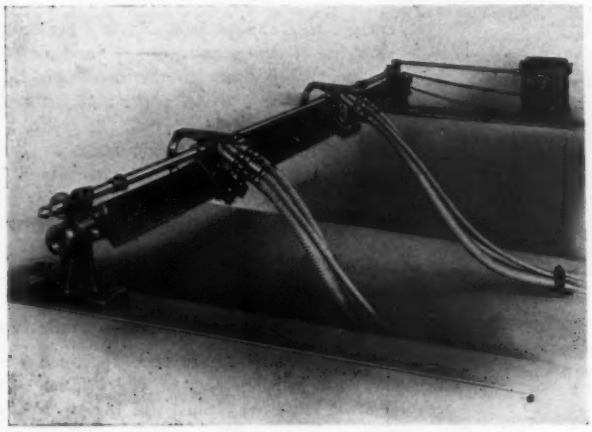
P. B. Wilson, vice president of the Spanish River Pulp and Paper Company, has taken up permanent residence in Montreal, and will in future devote himself to the activities of the newly-formed merger of Canadian news print selling agencies. Commenting on this move, the Montreal *Financial Times* says:

"It is quite evident, from the character of its organization and the circumstances surrounding its formation, that the Canadian News Print Company is destined to be something much more important than a mere selling agency for paper. It will presumably have to perform many of the functions of an arbiter for the entire Canadian news print industry, or at least for that large majority of it which is included in the organization; and during the next year or so those functions are likely to be particularly vital.

"It is, therefore, a matter for much satisfaction that the organizers of the company have been able to secure the services of such a man as Percy B. Wilson, for long the executive head of Spanish River at Sault Ste. Marie, as their manager. Mr. Wilson enjoys the complete confidence of everybody connected with the industry, both as regards his integrity and as regards his knowledge of what is best for the pulp and paper business of Canada. He will be able in his new position to command the support and allegiance without which the new company would be doomed to failure.

"As we have already pointed out, a nation-wide organization of the type represented by the new company is indispensable to the proper handling of a great export trade under modern conditions. No industry can hope to enjoy in perpetuity the position of catering to a market with a constant and ever-growing shortage of supply. The Canadian news print industry has enjoyed that pleasant position for a long time, and will enjoy it again, but it does not enjoy it at the present moment. It has now to show that it has as much ability for the scientific marketing of its product as it has already exhibited in the business of making it."

Out of 359 sold 240 are repeat orders



One paper maker says:

"We have been able to run the felts continuously until worn out, whereas, before the installation it was necessary to change them once to twice each week. We are able to weight our presses down heavier and thereby remove the water from the sheet more readily."

The Vickery Felt Conditioner

Another says:

"The Vickery Felt Conditioner has given us excellent satisfaction. We figure it not only increases production by eliminating washings of felts but that our felts are lasting at least 50% longer than they did without the conditioner."

The satisfaction of knowing that your felts are continuously clean, soft and open and that you are permanently rid of those exasperating and expensive shut-downs for washing and roping is worth a good deal.

To paper makers who take pride in their machines, it is worth, perhaps, even more than the substantial savings resulting from the Conditioner installation. They know that it has brought them a step nearer their ideal of continuous production of uniform quality paper.

BIRD MACHINE COMPANY
South Walpole
Massachusetts

894

BIRD MACHINERY

Kraft Situation Worries Chicago Paper Market

Curtailment of Tonnage From Southern Mills, Due to Mississippi River Floods, Anticipated in Some Quarters—Demand for Fine Paper Falls Off Slightly—Coarse Paper Industry In Sound Position—Book Paper Remains Quiet

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., May 16, 1927.—There are many different opinions circulating around Chicago as to the probable effects of the floods along the Mississippi. The continuation of its devastating effects during the past week has given rise to more speculation and actual opinion that points to the kraft situation as the most important at this time. Word comes from certain sources that hand-to-mouth, buying in the paper industry is due to receive a set back because of the flood. This report is of the opinion that hand-to-mouth buying depends upon the perfect working of two factors, transportation and supply of raw materials. That being the case, this opinion goes on to state that transportation in the south has completely gone under with the majority of the railroads serving the north, northeast and eastern portions of this country so badly damaged that supplies of kraft paper from the Louisiana mills have been greatly curtailed.

This situation would not be so alarming, according to certain reports, if the vast acreage from which the raw material is taken was not flooded. It is said that the southern mills buy their wood currently and therefore are facing a serious shortage that it will take some time to recover from. Reports state that there has been no wood cut for over thirty days and that the flood has so disorganized the industry and affected the raw material that it will be impossible to cut wood for the next four or five months. Therefore, the opinion of certain paper men continues, there will be a serious curtailment of kraft tonnage to the markets.

Here, according to reports, the hand-to-mouth buying conditions must go tumbling for converters of kraft tonnage in all lines are said to be buying all available tonnage to protect themselves in the near future. In some houses it is stated that no stocks of kraft paper are available in any position.

In direct contradiction to this statement comes another opinion of the situation, much more optimistic, according to some kraft men. It is admitted that the flood will seriously affect the South, but the fact that it will interfere with other portions of the country is disputed. There is a tendency for some to believe that the Northern mills will be able to supply plenty of kraft to counteract the losses in the South.

The remainder of the paper market remains in much the same condition as last week. Coarse papers seem to have picked up slightly, while fine papers are a little slower, due solely to a normal falling off in demand. Prices are stable and it is believed that any lowering of price, which is looked upon as very unlikely, would not stimulate business, because it is only affected by a normal lack of buying. Book paper remains quiet while a few mills in coated grades are running far behind in orders, in contrast to certain others who are having some trouble in getting orders. Old paper have not improved and, in certain old paper houses another slump is expected next month. All in all, nearly every one is optimistic, pointing to a natural slump in demand as the only uncontrollable element in the market.

Chicago Merchants Discuss Paper Situation

The Chicago Paper Association met May 10 at the Hotel Sherman for dinner and an informal discussion. Edgar Hall, Jr., of Pilcher-Hamilton Company, newly elected president, presided. No formal program was carried out and no speaker was scheduled to talk. However, the round table discussion following the dinner revealed the fact that business conditions were improved over those of last month. Another discussion centered around the cost of cartage on warehouse deliveries. It was demonstrated that cartage costs ranged from 2½ to 5 per cent and that certain types of delivery equipment were more desirable than others because of their adaptability to the needs of the paper men. It was deemed advisable to have the association conduct an exhaustive investigation on cartage costs in order to attempt to make it possible for members having excessive cartage costs to get the same at a price that will compare favorably with those in other industries. Within thirty days the Chicago Paper Association expects to be able to present printed information to members with recommendations as to how paper products can be most economically delivered and as to what percentage of cost the members should try to reduce their prices to.

Miscellaneous Trade Items

Dwight Brothers have recently issued a new sample book portraying a complete line of fine printing papers. The entire line depicted is so well filled out that it is said to be able to take care of 95 per cent of all requirements for book and advertising printing needs. The sample book includes lines of book paper, fancy antiques and deckle edge stock. The book, which contains 204 samples and 34 different kinds of paper is to be widely distributed in the Chicago area. In addition to its completeness it is of ample size to allow the buyer to tell the character of the paper from the samples.

The James White Paper Company is working on a new sample book which will contain about eleven lines of book and 49 lines of cover paper. This will be an increase over both lines of last year, though otherwise the sample book will be practically the same. It will be ready for the trade about September 1. Among the new lines to be featured are Ravenna and Indian Head, both cover papers made by the Knowlton Brothers Company, Watertown, N. Y., and a line of Lee Deckle Edge cover paper made by the Lee Paper Company, Vicksburg, Mich.

The Swigart Paper Company has also issued three new sample books illustrating the new lines of the Reading Paper Company, Louvain, Bodleian and Kinkora. Louvain is a book paper that comes in six colors, Kinkora is a deckle edge paper also made in an assortment of colors, while Bodleian is a deckle edge paper in six colors and two weights.

These new addional lines are confidently expected to become very popular with the trade.

Of general interest to the paper trade is what is said to be a world's record in production made by the mechanical departments of the *Chicago Tribune*, on the evening after the recent mayoralty election, in which there were 921,530 copies of a 52 page three section paper delivered to the public, the last copy being delivered just 8½ hours after the first line of type was set. The paper used in the edition amounted to 586 press rolls or fourteen freight car loads, just 388 tons or 775,084 pounds. It represented 580 cords of pulp wood or the spruce and balsam trees growing on an 85-acre tract of the *Tribune's* virgin forest in Quebec.

The total issuance of new spring lines was further enhanced by the Midland Paper Company and the Paper Mills Company, both of Chicago. The former issued samples of Sales Record Ledger expected to be very popular because of its good writing surface and erasing qualities. The Paper Mills Company set forth samples of Cockatoo, a Strathmore book and cover paper in green, yellow, blue, red and white, New samples of Araby Cover and P. M. Special white coated book were also placed at the disposal of the trade.

(*Continued on page 26*)

BEATERS!

—A necessity in the manufacture of paper. Equally as necessary is the application of the right kind of beating equipment to your product. Valley Beating Equipment is satisfactorily serving the paper industry throughout the country. Valley Beaters insure good paper, economical maintenance, and steady production.

FOR YOU

Valley Beaters are worth investigating. Let us show where they will meet your requirements exactly. Interesting information setting forth all the advantages of Valley Beating Equipment will be forwarded to you on request. Write for this data today.

Valley High Speed Beaters
Valley Holland Beaters
Niagara Beaters

Experimental Beaters

VALLEY IRON WORKS CO.
APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

Fox River Valley Paper Mill Developments

Government Petitioned for Better Harbor Facilities by Hoskin-Morainville Paper Co., and Other Industries, to Cope With Increasing Amount of Materials Imported—DePere Mill Contemplates Adding Another Paper Machine

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., May 14, 1927.—The Hoskin-Morainville Paper Company, of Menominee, Mich., is joining with other industries there in petitioning the government for better harbor facilities. Deepening of the harbor to 21 feet and establishment of a turning basin in the Menominee river are among the improvements asked.

With the increasing amount of materials that this paper company imports, the need of better shipping facilities has become apparent. The company brings to the port of Menominee approximately 20,000 tons of coal annually, and also receives 4,400 tons of pulp wood a year direct from Sweden. Chemical lime is also obtained through shipment via the Great Lakes. All essential data on the situation have been collected by the industries and submitted to the district federal engineer for action.

Bright Outlook for De Pere Mill

Installation of another paper machine is contemplated in the near future by the DePere Paper Manufacturing Company, DePere, Wis., according to announcement of Maurice Miller, manager. The mill has been obliged to operate over time on some occasions to take care of its production demands. The outlook for increased business is considered very favorable at this time.

Tomahawk to Retire Bonds

Earnings of the Tomahawk Pulp and Paper Company, Tomahawk, Wis., are reflected in an announcement by the corporation that it will retire $47,000 worth of its first mortgage 7 per cent sinking fund bonds this spring. These bonds are redeemable at a price of 105 and will be taken up by June 1. At the time the bond issue was made, a provision of the trust agreement was to set aside a portion of the earnings each year for a sinking fund to retire the bonds. Business conditions have been good in the Tomahawk plant, with highly satisfactory earnings for the last year.

Menasha Employes Entertained

Menasha Printing and Carton Company, Menasha, Wis., entertained forty employees of its Wausau, Wis., plant on Saturday of last week. A dinner was served at the company's gymnasium and the evening was devoted to bowling. On Sunday the guests were conveyed to the cottage of Peter Borenz, Lake Poygan, where the day was spent in entertainment.

Pulp Wood Situation

Wisconsin mills consumed 1,224,443 cords of wood during the year 1926, according to reports given out by the United States Department of Commerce. The total production of pulp wood was 1,071,139 tons of wood pulp, the figures show. Some pulp wood is still arriving for the mills from last winter's cut but the shipping season is practically at an end.

No Accident Week

Paper mills of Green Bay, Wis., are assisting in a city wide "No accident" week, beginning Sunday, May 15. The safety programs of the mills are being given especial emphasis so the paper industry may contribute toward the record the city is trying to achieve.

Accidents to Paper Mill Employes

Two paper mill employees suffered severe hand injuries while at their work during the last week. William Downey, foreman of the Peshtigo Paper Company, Peshtigo, Wis., dislocated his wrist and had his hand cut severely when it became caught in a cutter. The other accident occurred to Hartley Seymour, of the Victory Bag and Paper Company, Marinette, Wis. His hand was lacerated when it became caught between two rollers in a paper machine.

Remodeling Paper Workers Homes

The Flambeau Paper Company, Park Falls, Wis., is remodeling a number of the homes which it rents to employees. Water and sewer connections are being provided so that the dwellings can be modernized.

Power Institution for Maintenance Crews

A new feature of the statewide courses which will be offered in vocational schools on paper and pulp manufacture will be instruction in power transmission and power uses, according to H. G. Noyes, state supervisor. The class will be especially for maintenance crews so that they will have a better knowledge of their work and the paper industry in general.

KRAFT SITUATION

(*Continued from page 24*)

The Central States Paper Association will hold a meeting in Chicago, May 19. A large attendance from out of the city is expected.

W. D. Randall, vice president of the Champion Coated Paper Company, was in Chicago for a day or two during the past week.

Pilcher-Hamilton Company mailed out over 6,800 copies of their house organ, the *Bookanwrap*, during the past week. The mailing list included representatives of the United States from California to New York and even across the waters to England. Nearly 500 New York readers were reached.

Word has come to the Chicago offices of box manufacturers that S. M. Phelan, Jr., who has been connected for over one year with the Foster Box Company, of Utica, N. Y., as general manager, severed his connections with that company on March 15 and is now taking a much needed vacation in Europe with his family. Mr. Phelan is well known in the box board industry.

David J. Varney Killed in Accident

GREENWICH, N. Y., May 16, 1927.—David J .Varney, assistant engineer at the plant of the Iroquois Pulp and Paper Company, was the victim of an accident at the mill Monday morning that resulted later in his death. Mr. Varney, who was 54 years old, was endeavoring to repair a broken belt operating one of the grinding machines when he was struck a terrific blow by one of the loose ends of the broken belt. He died twenty minutes later and before he could be removed from the mill.

Mr. Varney had been an employee of the Iroquois Pulp and Paper Company for seventeen years and was well liked by the employees. He was a member of Northumberland Lodge of Masons and took an active part in Masonic affairs. He is survived by four sons and four daughters.

Monday's accident being the first to result fatally at the Iroquois mill in a long period cast a pall of gloom over the entire plant. It has been established that the accident was unavoidable.

Boston Paper Trade To Meet June 7

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., May 16, 1927.—The annual summer meeting of the Boston Paper Trade Association will be held at the Charles River Country Club on Tuesday, June 7. There will be the usual program of sporting events, announcement of which will be made later.

Announcing—

The Dilts Improved Siphon Washers

FOR

Beating and Washing Engines

An entirely new idea in cylinder washers.

Simple in operation and design.

The water is removed from the inside of the disc by means of a natural siphon created by the discharging water.

The siphon is maintained by an air exhausting priming siphon operated by the fresh water coming into the beater under pressure.

There are no buckets.

Made in Single, Double and Triple Disc sizes.

You'll be interested in knowing more about this new washer.

Write for particulars.

Photograph of Dilts Triple Disc Siphon Washer installed on a Bellmer Bleacher at the Howard Smith Paper Mills, Ltd., Cornwall, Ontario.

"Your Paper is Made in Your Beaters"

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

Paper Demand in Boston Fairly Satisfactory

Some General Paper Merchants Report That They Are Selling a Greater Volume of Paper Than in April—Box Board Market is Steady With Consumption About Equalling Production—Waste Papers Quiet—Storrs & Bement Co. Holds Exhibit

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., May 16, 1927.—Fair-sized amounts of paper are moving in the market as a whole. Some say business in ledgers, bonds, writings, and book paper is good, while others find it spotty. In some quarters jobbers state that they are selling a greater volume of paper the present month than they were in April.

The box board market is maintained at a steady pace, jobbers selling at about the same rate at which the manufacturers are producing. Kraft paper is steady, with No. 1 grade quotable at 5¾ to 6½ cents, f.o.b. mill, and No. 2 grade at 5 to 5¾ cents.

Paper Stock Quiet

Old papers are rather quiet, with prices sustained at the same levels as previously.

In bagging the market has declined in certain grades, because of slower demand. Foreign gunny No. 1 is weaker, and quotable at 1.50 to 1.75, f.o.b., Boston, compared with a previous range of 1.75 to 2.00. Foreign manila rope is quotable at 3.50 to 3.75, compared with a former range of 3.75 ot 3.87½.

Few domestic rags are being sold, according to reports, although no price changes of importance have taken place. It is stated among dealers that mills are staying out of the market as much as possible in order to prevent prices from advancing. Evidently manufacturers have a sufficient supply on hand to meet their needs until June 15 or July 1. Little, if any, activity exists in the foreign rags, and there seldom, if ever, is when the domestic business is dull.

The roofing rag market is stronger. Roofing stock No. 1 is firm at 1.37½, No. 2 at 1.25, No. 3 at 1.12½, and No. 4 at 1.00.

The annual outing of the Boston Paper Trade Association is to be held at the Charles River Country Club, Tuesday, June 7. The program will be similar to that of last year. It is expected that it will include golf, tennis, baseball, and other outdoor sports.

Notices are being sent out to paper box manufacturers and supply men that the summer outing under the auspices of the Boston Carton Club will be held at the Vesper Country Club, Lowell, Mass., Tuesday, June 14.

Storrs & Bement Co. Hold Exhibit

The Storrs & Bement Company, paper merchants for more than 75 years, held a Graphic Arts Leaders Exhibit, consisting of a collection of printed masterpieces, in their sales service rooms at 140-150 Federal street from May 9 to May 13, inclusive. The masterpieces were selected from more than 1,500 specimens submitted by leading printers of America. The main object of the exhibit was to create a higher appreciation of the value of quality. The buyers of printing as a whole have a keen appreciation of the value of copy, but do not appreciate the value of quality printing. They should also be willing to pay a price commensurate with such quality. Storrs & Bement further believe that to develop taste in quality printing it is necessary to show a great many what real quality printing is, hence the reason for the time and energy which they and their sponsors put back of the exhibit.

The judges were Norman T. A. Munder, Harvey Hopkins Dunn, William T. Innes, J. Howard Fell, and George W. Ward, ex-officio.

Of the exhibit leaders, the first choice was John Henry Nash, San Francisco, Cal.; second choice, Redfield-Kendrick-Odell Company, New York City; third choice, Roger Williams Company, Cleveland, Ohio.

The following received honorable mention: The Artcraft Printing Company, Cleveland, Ohio; Douglas C. McMurtrie, Inc., New York City; William Edwin Rudge, New York City; Charles W. Smith, Waynesboro, Va.; Young & McAllister, Inc., Los Angeles, Cal.

The Exhibitors

The exhibitors included The Aldus Printers, Inc., New York City; American Colortype Company, Chicago, Ill.; The Caslon Company, Toledo, Ohio; Commanday-Roth Company, Inc., New York City; A. Colish, New York City; Columbian Colortype Company, Chicago, Ill.; The Corday & Gross Company, Cleveland, O.; The Caxton Company, Cleveland, Ohio; The Caxton Press, Canton, Ohio; The Dean-Hicks Company, Grand Rapids, Mich.; R. R. Donnelly & Sons Company, The Lakeside Press, Chicago, Ill.; Eddy Press Corporation, Pittsburgh, Pa.; The Faithorn Company, Chicago, Ill.; The Foss-Soule Press, Inc., Rochester, N. Y.; Franklin Printing Company, Philadelphia, Pa.; Garamond Press, Inc., Baltimore, Md.; Ginn & Co., Boston, Mass.; Gordon-Taylor, Inc., Cambridge, Mass.; W. F. Hall Printing Company, Chicago; Harrison & Smith Company, Minneapolis, Minn.; Harvard University Press, Cambridge, Mass.; The Hollenbeck Press, Indianapolis, Ind.; Johnck, Kibee & Co., San Francisco, Cal.; Wm. G. Johnston Company, Pittsburgh, Pa.; The Fred S. Lang Company, Los Angeles, Cal.; The Magee Brothers Company, Piqua, Ohio; Marchbanks Press, New York City; McGrath-Sherill Press, Boston, Mass.; Merrymount Press, Boston, Mass.; Norman T. A. Munder & Co., Baltimore, Md.; Pyson Printers, New York City; The Saturday Night Press, Detroit, Mich.; Seaver-Howland Press, Boston, Mass.; The Southgate Press, Boston, Mass.; The Southworth Press, Portland, Me.; Spencer Printing Company, Kansas City, Mo.; Edward Stern & Co., Inc., Philadelphia, Pa.; The Sunset Press, San Francisco, Cal.; Taylor & Taylor, San Francisco, Cal.; Walsh Press, Boston, Mass.; Bert L. White Company, Chicago, Ill.; and Yale University Press, New Haven, Conn.

The exhibit comprised broadsides, booklets, a series of mailing pieces and a counter card, a quarterly magazine, a board bound book, a poster designed and cut in linoleum, and folders. There was a large variety of paper and designs including the four color process, antique paper, dull coated enamel paper, black and silver on imported paper, semi-dull coated enamel, two colors and gold, four colors of pastels, handmade stock, lithographed in four colors, cream book paper, antique laid stock, three colors on handmade stock, three colors on enameled stock, and antique, deckle edged paper.

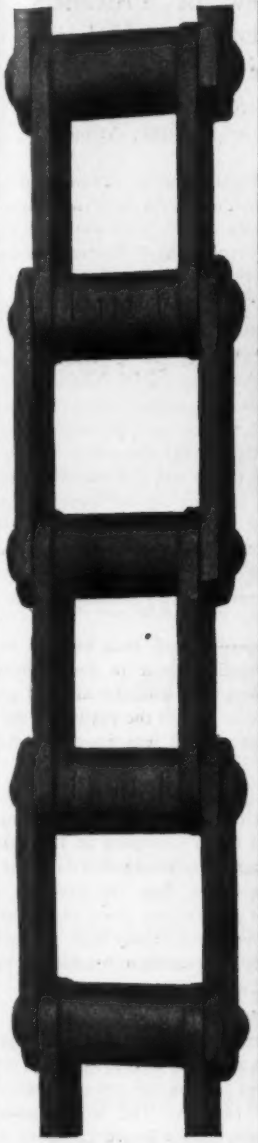
General Trade News

The American Writing Paper Company gave a dinner for salesmen of Boston houses representing its lines at the new Hotel Statler Friday evening, with over 100 present. The firms represented were John Carter & Co., Inc., Carter, Rice & Co., Corporation, Arnold-Roberts Company, and Knight, Allen & Clark, Inc.

The paper houses in Portland, Me., have returned to the ream basis of selling in preference to the thousand-sheet plan, a fact which is of considerable interest to the Boston merchants.

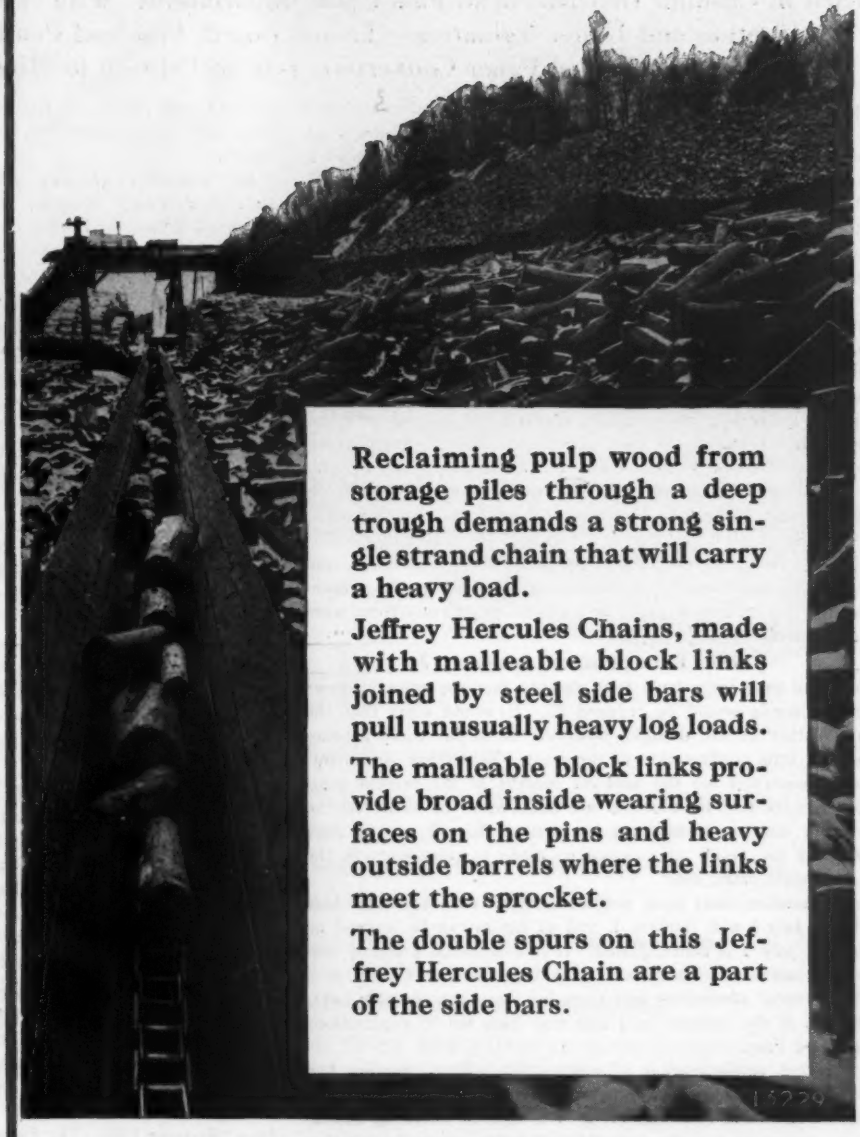
Grellet Collins, president of Dill & Collins Company, Philadelphia, was in Boston last week, accompanied by W. R. Ingersoll, who represents the Dill & Collins Company in New England.

Jeffrey Chains for Every Service



Jeffrey Hercules Chain for drives and rough service handling pulpwood, coal, etc.

A Long Chain Haul



Reclaiming pulp wood from storage piles through a deep trough demands a strong single strand chain that will carry a heavy load.

Jeffrey Hercules Chains, made with malleable block links joined by steel side bars will pull unusually heavy log loads.

The malleable block links provide broad inside wearing surfaces on the pins and heavy outside barrels where the links meet the sprocket.

The double spurs on this Jeffrey Hercules Chain are a part of the side bars.

The Jeffrey Manufacturing Company

931-99 North Fourth St., Columbus, Ohio

New York, Buffalo, Chicago, Charleston, W. Va., Rochester, N.Y., Philadelphia, Milwaukee, St. Louis, Pittsburgh, Scranton, Pa., Denver, Salt Lake City, Boston, Cincinnati, Los Angeles, Birmingham, Cleveland, Detroit, Charlotte, N.C., Montreal

50 YEARS OF SERVICE TO INDUSTRY

JEFFREY

MATERIAL HANDLING EQUIPMENT

Jeffrey Products

Elevators—Conveyors
Portable Loaders
Pulpwood Stackers
Coal and Ashes Handling Equipment
Skip Hoists
Chains and Attachments
Sprocket Wheels—Gears
Crushers—Pulverisers
Sand and Gravel Handling, Washing and Screening Equipment
Locomotives
Ventilation Fans

Canadian Mills Want Expert Paper Appraiser

Needed in Customs Department to Pass Upon Importations With View of Preventing Misclassification and Under Valuation—Tissue, Board, Fine and Coated Paper Makers, and Waxed Paper Converters, Join in Petition to Ministry

TORONTO, Ont., May 16, 1927.—An important conference was held recently at Ottawa with the Hon. W. D. Euler, Minister of Customs, and R. W. Breadner, Commissioner of Customs, when a deputation representing various paper interests waited upon these gentlemen. The deputation petitioned the Minister for the appointment of an expert paper appraiser as a member of the Customs Department staff to pass upon importations of paper and paper commodities with a view of preventing a mis-classification and under-valuation of such imports.

Arguments were presented in support of the petition and the Hon. Mr. Euler stated that the Department proposed to appoint a Board of travelling appraisers. In so doing it would be pleased to take into account the representations made by the members of the paper industry. Those who composed the deputation were, George Carruthers, of the Interlake Tissue Mills, former president of the Canadian Pulp and Paper Association; D. F. Robertson, Canadian Paperboard, Ltd., Montreal; J. F. Taylor, E. B. Eddy Company, Hull; John M. Finlay, Ritchie & Ramsay, Toronto; G. F. Clark, Appleford Counter Checkbook Co., Hamilton; Edward Back, secretary, Canadian Pulp and Paper Association, and John Bain, customs agent. Manufacturers of tissue papers, paperboard, fine paper, coated paper and waxed paper converters were all represented.

News Print Situation Analyzed

For some time there have been rumors that the price of news print in Canada would be reduced $5. It would seem that the wish is father of the thought, however, as so far there appears to be very little confirmation of the story. No change is contemplated in contracts for the final six months of the present year. Recent reports that have arisen are believed to be based on the belief that some companies are not netting $65 per ton on their business as the result of concessions made to consumers in the way of freight rates, etc.

Most Canadian news print producers renew their contracts half yearly on July 1 and January 1, and so far as can be learned no change on July 1 is contemplated. It is considered probable that some consumers may have been led to hope for lower rates as a result of recent admissions that there has been considerable overproduction in the industry and this may have led to expectations along those lines.

The recent amalgamation of news print selling agencies had for its purpose among other things the creation of a better balance between output and consumption with a view to obviating alterations in quotations for the commodity, it being generally felt that the present rate is satisfactory to both producers and consumers. Voluntary reduction in the present price would, it is claimed, be disturbing and without any advantage.

Veteran Paper Salesman Honored

Charles F. Mansell, veteran paper salesman, left on May 13 in company with his sister on an extended holiday trip to England, which country he left some fifty-six years ago. Mr. Mansell is now in his eightieth year and is hale and hearty, and previous to his departure from Toronto was the recipient of a pleasant surprise in the Board of Trade rotunda when about forty of his friends assembled to bid him goodbye. John F. Ellis, honorary president of the Canadian Paper Trade Association, presided, and made the presentation of a purse of gold, and a leather scroll bearing the signatures of numerous friends of Mr. Mansell. Addresses expressing good wishes and recalling many early associations in the trade, were made by A. F. Rutter; T. J. Macabe; James Logie; H. F. E. Kent, former president of the Canadian Pulp and Paper Association; George Scott; Arthur Hobson, and others.

Mr. Mansell is, possibly, the oldest paper salesman in Canada. In 1871 he joined Warwick Brothers, and later was with James Campbell & Son, and for the past forty years has been active in the sales department of the Toronto Paper Manufacturing Company and latterly the Howard Smith Paper Mills. No man in the industry enjoys a wider measure of esteem and respect.

Paper Box Men Want Protection

R. S. Dunlop appeared on behalf of the Canadian Paper Box Manufacturers' Association before the Tariff Advisory Board in Ottawa recently. The industries represented, he said, valued their yearly products at a total of $12,556,841, used $6,000,000 of material and paid wages amounting to $3,543,193 annually. The concerns represented were converters of paper and paper board into boxes and needed more protection to compete against importations. The application was included within the matter before the Board because most of the boxes were either printed or lithographed. Materials had to be purchased abroad and could not be secured as cheaply by Canadian manufacturers as by manufacturers in the United States.

Chairman Moore of the Board stated that he had not been advised that the box makers would appear in the application of the printers and lithographers and that, while he allowed presentation of the brief, he would have to submit the matter to the Minister of Customs before deciding that it was properly before the Board.

Efficiency Is Well Maintained

Great efficiency was shown from a production standpoint in the plant of the Abitibi Power and Paper Company at Iroquois Falls, Ont., during April. The average daily production over the month was 541 tons, being six tons better than the previous record, which was 534 tons. The most satisfactory point about the showing is that the result was achieved by a steady high production on all the machines and not only one or two machines; in other words, efficiency throughout the plant.

Will Locate in Brantford

The plans for the new factory of the Canadian Paperboard Company are nearly completed and it is understood that the plant will be located in Brantford, Ont., where the company will acquire the Dominion Steel Products' factory. The latter building has been idle since 1920. The Canadian Paperboard Company contemplates turning the structure into a complete paperboard mill which will employ many hands.

Much Pulpwood on Move

Hundreds of cords of pulp wood have floated down the McIntyre River between the cities of Fort William and Port Arthur, Ont., and for almost a mile the river is filled with logs. The wood is being held by strong booms at the mouth of the stream until ready for rafting and towing to the paper mills in Port Arthur and Fort William, or for loading for export.

Notes and Jottings of the Industry

J. H. Black, of Toronto, president of the Spruce Falls Power and Paper Company, has purchased the home of the late A. L. Malone, K.C., at 589 Avenue Road, Toronto, this being one of the most attractive and centrally located residences in the city.

C. R. Stewart has been appointed employment supervisor of the

(Continued on page 64)

Bed Plates of Solid Rock

Beater bed plates cut out of solid rock—the hardest obtainable . . . the famous Pike River Gray Granite from Wisconsin

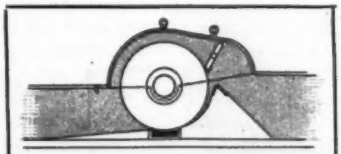
These granite bed plates do not cut nor shorten the fibres like steel or other fast cutting plates. The texture of the stone has a tendency to brush and draw out the fibres, producing a stronger, better quality paper.

Pike River Gray Granite plates are being successfully used in mills making kraft, sulphite, ground wood, bag, bond, ledger, tissue and various grades of machine glazed papers. They're economical. Can be grooved until worn nearly through. Will stand up under extreme beater strain. Absolutely guaranteed against breakage.

Pike River Gray Granite Plates are interchangeable with your present plates—secured in the beater the same way.

Put these bed plates in your beaters. Prove to your own satisfaction how well they stand up—the better product they consistently insure.

Write us for prices, giving diameter and face of your beater rolls and the width of plates in which you are interested. The quotations will interest you.



Cross section of beater showing bed plate in place

The NOBLE & WOOD MACHINE COMPANY

HOOSICK FALLS, N. Y.

Cheap Power An Article for Executives

R. S. Bayntun *

The increasing tendency among paper and pulp mill executives to take full advantage of the possibilities offered by the installation of a high pressure boiler and turbine plant to obtain cheap power as a by-product, is a matter of such importance as to deserve at least careful investigation by all progressive organizations.

A reliable and cheap source of power for the numerous drives essential to the processes of the mill may well prove the deciding factor in the profit and loss column at the end of the year, and there is no excuse for failing to investigate the possibilities involved in each individual case.

An organization which of set purpose closes its eyes to all consideration of methods which its competitors are using and finding profitable has no permanent place in a highly competitive market such as exists in the paper industry.

It has often been objected that the power costs form so small a proportion of the total cost of production that the influence of any savings likely to be effected is of minor importance, and that it is preferable to concentrate all efforts on the process plant, since it is there the profit is made or lost.

This point of view is entirely fallacious, as the writer hopes to show.

Power Costs an Important Factor

In the first case, the return on capital investment offered in most cases by the installation of a power plant of the type indicated is of such a magnitude as to exceed by a large margin those which could be obtained by the expenditure of an equal amount in other sections of the mill. Recent installations show savings such as will return the whole sum invested in periods round three years.

The net amount of the savings may appear small in comparison to the annual turnover of the mill, but to this criticism we would reply, "What of the sum representing the dividends you show on your balance sheet? Are they not also unfortunately small compared with the total sums involved?"

The point is this—after payment of the fixed charges the net savings are all additional clear profit, and an extra one, two or three per cent on the declared dividend is likely to be a source of considerable gratification to the shareholders.

Can this desirable end be definitely assured? And if so, why are not more organizations pressing forward with improvements of so profitable a nature?

To the first question we may reply that all the available information goes to show that the plants of this type already installed are proving unqualified successes, and that given correct design by competent engineers who have made a specialized study of the conditions involved in this particular method of operation, the results will follow as surely as any other results of correct engineering design.

Savings from Byproduct Power

The novelty of these schemes is more apparent than real, since extraction type turbines have been in use for low pressures for many years and have amply demonstrated their utility, and at the present day we are merely extending the same principles to cover higher initial and black pressures, with the object of obtaining as large a proportion as possible of the total power required by the mill as a by-product, while still exhausting the steam at a pressure sufficiently high to be used for all mill purposes, that is, to retain the existing steam header and supply the steam at the pressure best suited for operating such of the equipment as is not replaced in the process of making the changes.

By planning along these lines, maximum savings may be secured with a minimum disturbance of existing plant, and consequently also with a minimum capital expenditure.

To the second of the questions propounded above, we would answer that power plants of a type sufficiently advanced to obtain the full advantage of the possibilities are as yet a comparatively new development, since it has been necessary to await the arrival of satisfactory types of high pressure boilers and turbines essential to the scheme. With the rapid advances in steam pressures adopted of late years by the public utilities, and the entirely satisfactory operation of such plants, the ground was cleared for the industrial adoption of similar methods, and the concentrated attention of the principal steam turbine makers on the development of the high pressure extraction turbine has made economical generation of by-product power a commercial success.

There appears to be, however, an innate conservatism in the industrial world generally, when considering prospective improvements in power generation, which they are very far from exhibiting in matters affecting their process equipment. It is a curious point for reflection that the same executves who are so creditably anxious to take full advantage of new developments in process work and machinery that they have thereby placed this country far in advance of all others, in spite of the much higher scale of wages paid, should hesitate and wait for others to show the way in matters concerning power generation. It is as though they suffered from an inferiority complex in all things pertaining to one end of the job, which would never enter into questions relating to the other end.

There seems to be a definite feeling in many quarters that even if the power plant is inefficient and out of date, it does not matter very much so long as it keeps turning and delivers the steam and power needed for full production.

Investment Returned in Two to Four Years

This is a defective, and illogical line of thought, as a consideration of the foregoing arguments must infallibly demonstrate. If savings can be made, and it has been proved that they can, of such an order as to return the capital investment in two to four years, what benefit is obtained by shutting one's eyes to them?

A probable partial explanation of the causes which underlie the hesitancy displayed by many executives in at least making investigations as to the savings that may be made in their mills in this direction, lies in the fact that while most of them are specialists in matters concerning the technical work of their process, very few are also specialists in power generation, and most are insufficiently acquainted with what has recently been accomplished along these lines. They must necessarily rely on the advice of those who have made a specialized study of the subject and one is naturally more inclined to divert available capital along lines regarding which one has first hand information than into channels wherein it is necessary to be guided by advice from others.

This is, we grant, a perfectly natural and understandable tendency, but it should not be allowed to become a controlling factor to the extent of losing dividends which may be obtainable.

It is not out of place here to refer to the importance of engaging the best possible advice in investigations of this character. The number of different schemes that may be evolved to meet any individual case renders it highly advisable to employ the services of a competent firm of engineers who have made a specialized study of this particular kind of work.

A dozen schemes might be drafted for power plant improvements in a given mill, and while all might show good prospects and return considerable savings, one might cost $50,000 or $100,000 more than another, the savings obtainable in one case might be $100,000 to $50,000 per annum less than with better designs, and when it came to the point of the selected scheme being installed, it might well be found that the operation was proving less reliable and more difficult than would have been the case had more foresight been shown.

* Member A.S.M.E. Paper Mill Engineer, The Rust Engineering Co., Pittsburgh, Pa.
* Member A.S.M.E.

Morse Silent Chain, enclosed in dirt-proof case, driving directly from motor to machine in prominent paper mill.

Direct to the Machine

Compact, enclosed in dirt-proof cases, Morse Drives transmit power directly to the machine. They need only a small floor space and permit the most efficient grouping of machinery. They are unaffected by dirt, dust, fumes and moisture.

98.6% efficient, positive, flexible. One-tenth to 5,000 H.P., 6,000 to 250 r.p.m. and slower, 3/8" to 3" pitch.

Morse Transmission Engineers at the nearest office are ready to serve you.

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Morse Engineers are always available at:

ATLANTA, GA.....702 Candler Bldg.
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BUFFALO, N. Y.....Ellicott Square Bldg.
CHARLOTTE, N. C.....404 Commercial Bank Bldg.
CHICAGO, ILL.....112 W. Adams St.
CLEVELAND, OHIO.....421 Engineers Bldg.
DENVER, COLO.....211 Ideal Bldg.
DETROIT, MICH.....7601 Central Ave.
LOUISVILLE, KY.....516 W. Main St.
E. D. Morton Co.
MINNEAPOLIS, MINN.....413 Third St.
Strong-Scott Mfg. Co.
NEW ORLEANS, LA.....Queen and Crescent Bldg.
534 Camp St., A. M. Lockett & Co., Ltd.
NEW YORK, N. Y.....50 Church St.
OMAHA, NEB.....923 W. O. W. Bldg.
D. H. Braymer Equipment Co.
MINNEAPOLIS, MINN.....413 Third St.
Strong-Scott Mfg. Co.
PITTSBURGH, PA.....Westinghouse Bldg.
SAN FRANCISCO, CALIF.....Monadnock Bldg.
ST. LOUIS, MO.....2137 Railway Exchange Bldg.
TORONTO, 2, ONT., CAN.....50 Front St., E.
Strong-Scott Mfg. Co.
WINNIPEG, MAN., CAN.....Dufferin St.
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1856

MORSE SILENT CHAIN DRIVES

THE MORSE "ROCKER JOINT"

If the adoption of such radical changes is decided upon, it is important to ensure getting the best possible scheme which is of course the one which shows the highest return on the capital expenditure, and it at the same time best adapted to meet present and future requirements of the mill.

Features of a Balanced Scheme

Such a scheme should have in general the following leading features:—

(1) Taking into account all the variations, both normal and abnormal, that may occur in the demands for power and process steam, for mill purposes, it must be so designed as to deal with ordinary variations at a maximum operating efficiency while it must also be able to take care of all abnormal conditions, which may occur for short periods, without unnecessary disturbance or failure of supply. Seasonal fluctuations and heating load must here be taken into the account.

(2) It should aim to make as few changes as possible in the existing drives, retaining all that may be worked into the new scheme without loss, to avoid undue capital expenditure and interference with production during the changes. If the drives can be left intact, so as to be available for standby in case of necessity, it will reduce the outlay on new standby plant.

(3) The design should be sufficiently flexible to allow of future symmetrical expansion, so as to be extended to keep pace with future mill extensions, without upsetting the heat balance or losing efficiency.

Given a scheme designed on the lines indicated above and properly installed with high class equipment, the power end of the job will be a real money saver and the results will certainly show up well in the shape of increased dividends.

J. A. Remington Leaves Oswegatchie Co.

WATERTOWN, N. Y., May 16, 1927.—John A. Remington, manager of the Oswegatchie Paper Company mill at Natural Dam, two miles from Gouverneur, has tendered his resignation, according to word reaching this city. His resignation, it is said, will become effective within the next three weeks.

Mr. Remington has been manager of the Oswegatchie mill since the reorganization of the company about four years ago, which followed the erection of a new mill at Natural Dam. The Oswegatchie company is the successor of the old Aldrich Paper Company which was operated for many years by the late Newton D. Aldrich and earlier in its existence by Aldrich and Orison Dean, a pioneer in the paper business in northern New York.

Mr. Remington is the oldest son of Mrs. Charles H. Remington, of Clinton street, this city. The Remington family were pioneers in the paper industry, Charles H. Remington being one of the earliest operators of mills in this section. His death occurred in 1914.

The Remingtons operated mills at Norfolk and Raymondville which later passed to the Hanna interests.

Mr. Remington's plans for the future are not known. It is said that he has several offers in view, but he has made no definite plans.

Naval Stores Encyclopedia

Published by the Hercules Powder Company, Inc., of Wilmington, Del., a complete reference work of the Naval Stores manufactured by this enterprising organization is being distributed. This valuable work contains a great number of illustrations, including panorama views of the company's plants at Brunswick, Ga., and Hattiesburg, Miss.

Of particular interest to paper makers is the section devoted to Hercules Wood Rosin, which is used for a multitude of purposes. This chapter is illustrated with photographs of the wood rosin storage plant at Brunswick, Ga., a typical barrel of rosin, and an employee making an ultimate analysis of wood rosin.

O. B. Andrews Co. To Open in Cincinnati

CHATTANOOGA, Tenn., May 16, 1927.—Plans for the development of a branch plant in Cincinnati, representing an investment of approximately $250,000, were approved by the directors of the O. B. Andrews Company. In making the announcement, O. B. Andrews, president of the company, said that with the local plant and the recently acquired Atlanta units and the projected Ohio works in operation, the O. B. Andrews Company will be one of the largest manufacturers of paper boxes in America.

Commenting on the new plant, Mr. Andrews said: "We have made a long term lease on a large factory located at the corner of South and Summer streets, Cincinnati, formerly occupied by Archer Buggy Company. It is unusually well located, with its own siding and special railroad facilities. It has somewhat more than 20,000 square feet of floor space. This plant is the culmination of very thorough planning over a period of several months, and upon installation of the necessary machinery, will be one of the most up-to-date mills fabricating paper cartons."

C. L. Mullinix will be the resident manager of the Cincinnati plant. H. V. Edington, who joined the company May 1, will be manager of the corrugated department. Mr. Edington has been connected with the Sefton Manufacturing Company's planning and sales department at Chicago for several years.

The O. B. Andrews Company is capitalized for $1,147,000 and has for several years enjoyed a progressively increasing business in the southern states. The development of a plant in Ohio is looked on favorably in local financial circles, and indications are that a good business will be recorded from the beginning. The general offices will be maintained in this city as in the past. Production at the new plant is expected to be started by May 15.

Middletown, The Paper City, Busy

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, May 16, 1927.—Middletown, known as "The Paper City," owing to the predominance of paper mills among its industries, today reports the best employment situation in years is now being enjoyed by the industrial and business interests of the town.

This report is made by Miss Nell Fitzgerald, director of the Bureau of Employment of the Civic Association. Up to this time Miss Fitzgerald has been pleased to meet all applicants with a smile and to offer them employment. There have been times when the employment expert could not greet the men so cordially, except to give them assurances she would do all she could when the situation warranted it. Many men who would willingly have worked rather than remain idle, even if paid for idleness, now have their wishes gratified and will not be obliged to wait for weeks in the employment office to grab at anything that appeared.

One company agreed to put to work every man who successfully passed the examination required.

The paper mills are generally running on full time and the employment conditions are reported to be satisfactory.

To Unionize Entire Industry at Holyoke

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., May 17, 1927.—Eagle Lodge Papermakers voted at their meeting today to organize and unionize the entire paper industry of Holyoke. The plan is to include beater men, washermen, stock diggers and third and fourth machine hands in the eligible class and in order to attract them there is to be a new scale of initiation fees adopted. The high cost of the initiation fees has deterred a considerable number from joining, it is stated. The new scale is to be drawn up by the state and local officers and submitted for ratification at the meeting of June 5. It is expected that the membership in the local lodge will be increased by about 500. The drive to enlist other workers in the paper mills under the union banner will be continued and also be intensified the next few weeks.

Removable in Two Sections, to Simplify Construction and Operation

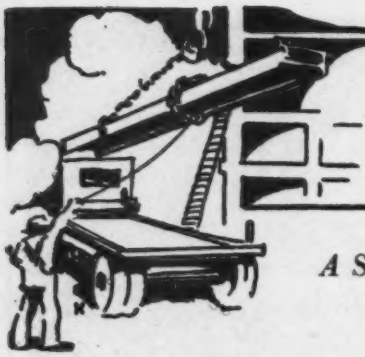
The Keystone Fourdrinier is divided into two separate removable sections, one containing the Table Rolls and the other the Suction Boxes. These two units are lowered independently, onto the rails, and rolled out for making wire changes. No electrical equipment is necessary for rolling them out on the rails, thus the expense of same is avoided. Each section rolls on large diameter wheels mounted on roller bearings, therefore one man can easily roll them out.

This is only one of the exclusive advantages obtainable in the Keystone Fourdrinier. Write us for complete information, list of users and ask us to explain how the wire can be changed or pitched without disturbing the inlet adjustments, —no obligation. When you need a Fourdrinier to make News, Kraft, Book, Tissue or Specialties, let us bid on your requirements.

Our Products Meet Our Promises

KEYSTONE Fourdrinier

Downingtown Mfg. Co.-East Downingtown, Pa.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Lowell, Mass.—The Lowell Paper Tube Corporation has acquired a local building formerly used by the Lawrence Manufacturing Company, textile manufacturer, for paper box service, and will take over at once. The factory is three-story, brick, totaling about 38,000 square feet of floor space, and will be improved by the new owner for early occupancy. It is purposed to remove the present works to the new location and increase the capacity.

Brooklyn, N. Y.—Philip S. Tashman, 392 Rockaway avenue, wall papers, has taken bids on general contract for the construction of a five-story addition to his warehouse and distributing plant, on site at 386 Rockaway avenue, estimated to cost about $65,000, with equipment. M. N. Weinstein, 93 Court street, Brooklyn, is architect.

EauClaire, Wis.—The Dells Paper and Pulp Company has awarded all miscellaneous contracts, including plumbing, wiring, etc., for its proposed new two-story addition, on which work is now in progress. The project will also include alterations and improvements in mill No. 1, with gross estimated cost placed at $60,000. It is proposed to have the new building ready for service at an early date. W. L. Davis is general manager. L. A. De Guere, Wisconsin Rapids, Wis., is engineer.

Port Huron, Mich.—The Dunn Sulphite Paper Company is arranging an expansion program to provide facilities for about double the present capacity, and it is understood that work will begin in the near future. The company has authorized a bond issue of $350,000, and a preferred stock issue of $55,000, a portion of the proceeds to be used for extensions. Theodore W. Dunn is president.

Syracuse, N. Y.—Hall & McChesney, 410 South Franklin street, manufacturers of paper goods for office service, ledgers, etc., is having plans drawn for the construction of a new plant at North Franklin and Danforth streets, reported to cost close to $30,000, with equipment. Guy L. Noble, Breese Building, is engineer.

Amarillo, Tex.—The Amarillo Paper Company, 308 East First street, has plans under way for the construction of a new two-story and basement building at Grant and Seventh streets, to be used for general warehouse and distributing service. It is estimated to cost close to $50,000, with equipment. The new structure is scheduled for completion in August. Benjamin Hirshland is president.

San Francisco, Cal.—The Zellerbach Paper Company, 534 Battery street, has awarded miscellaneous sub-contracts for the completion of its proposed new warehouse and distributing plant at Pacific and Front streets, including steel sash, steel rolling doors, plumbing, wiring, etc. The structure will be four-story, estimated to cost about $250,000, with equipment. Barrett & Hilp, 918 Harrison street, have the general contract. Ellison & Russell, Pacific Building, are architects and engineers.

Cincinnati, Ohio—The United States Paper Goods Company, 1224-48 West Eighth street, has awarded a contract to J. B. Schmitt, Cincinnati, for extensions in its bin department.

Baltimore, Md.—The Chesapeake Paper Board Company, Key Highway, has plans in progress for the construction of a new addition to its plant, to be 85x200 feet, one-story, designed to increase the output by approximately 40 tons per day, or double the present capacity. It will be equipped for the manufacture of folding boxes, etc. The estimated cost has not been announced. James E. Smith is president.

Middletown, Ohio—The Gardner & Harvey Company, 407 North Charles street, has completed plans for the construction of a new addition to its No. 1 mill on Third street. It will be two-story, reported to cost about $35,000, with equipment. A general building contract has been let to the F. K. Vaughn Company, Lowell and Dayton streets, Hamilton, Ohio, which will begin work at an early date.

Philadelphia, Pa.—The Crescent Box Corporation, D Street and Erie avenue, manufacturer of paper boxes and containers, will expend approximately $150,000 in its proposed new plant addition, instead of a smaller amount previously noted. The new structure will be two-story, and bids will be asked on general contract at an early date. The Ballinger Company, Twelfth and Chestnut streets, is architect and engineer.

Vancouver, B. C.—The Sidney Roofing Company has perfected plans for its proposed new pulp mill in the Industrial Reserve district, for which a general building contract has been let to Mitchell & DeBretigny, Victoria, B. C. The new unit is reported to cost close to $100,000, with equipment.

New Companies, Etc.

New York, N.Y.—The American Merrilei Corporation has been incorporated with capital of 250 shares of common stock, no par value, to manufacture and deal in paper and paper products. The company is represented by Mann & Reiss, 9 Park Place, New York.

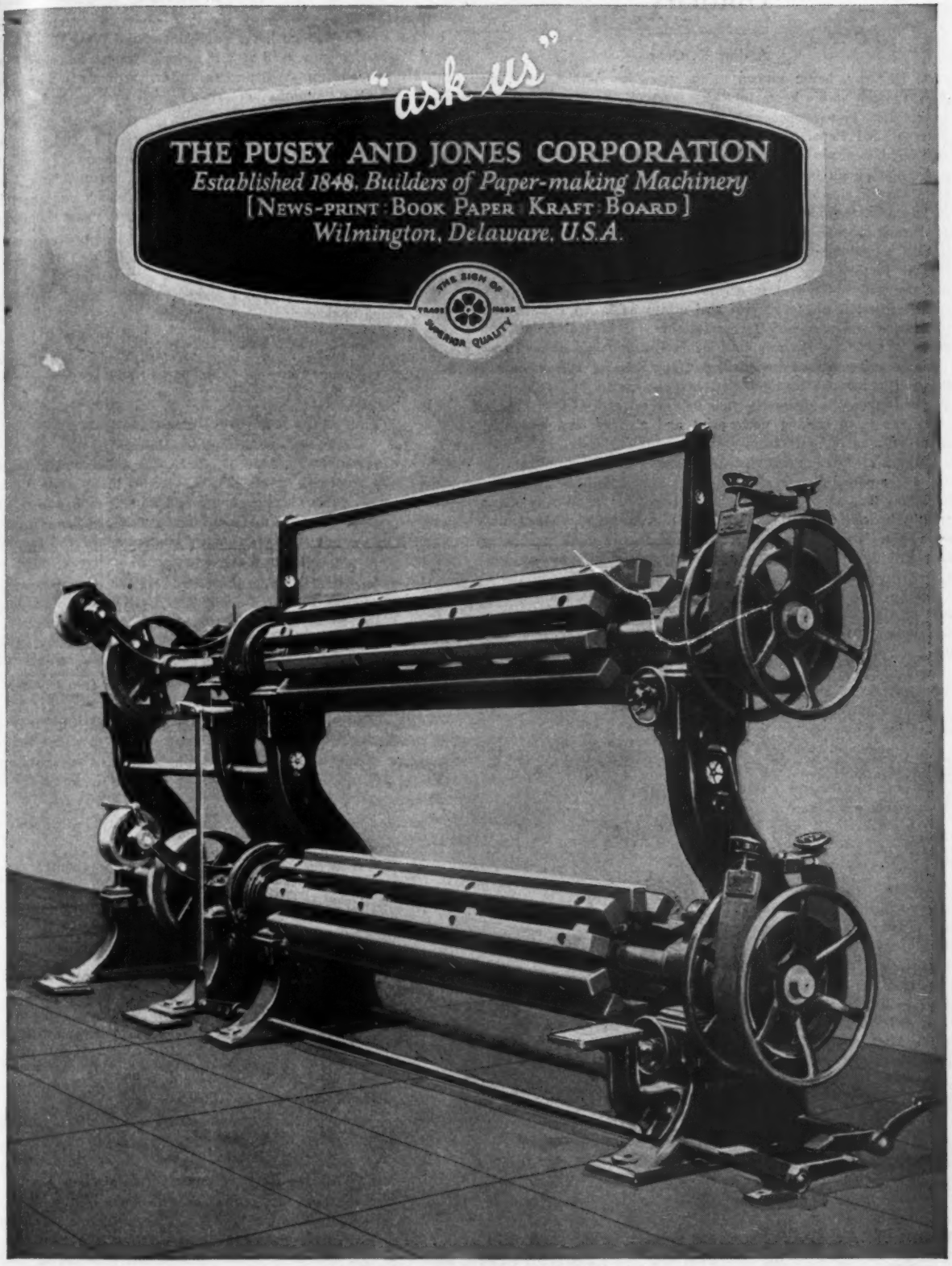
New York, N. Y.—The Eastman Specialty Company has been incorporated with capital of $25,000, to manufacture and deal in paper goods and stationery products. The company is represented by W. D. Williams, 233 Broadway, New York.

Boston, Mass.—The M. & W. Corrugated Box Co., has been organized, to manufacture and deal in corrugated paper boxes and containers. Frank J. Fleck and George A. McKay, 264 Dover street, Boston, heads the company.

Philadelphia, Pa.—The Cretissme Paper Company has been incorporated under Delaware laws, care of the Corporation Guarantee & Trust Company, 1,600 Delaware avenue, Wilmington, Del., representative, capital $100,000, to manufacture and deal in papers and paper products.

New York, N. Y.—The Risman Stationery Company has been incorporated with capital of 200 shares of common stock, no par value, to manufacture and deal in paper products, stationery, etc. The company is represented by A. A. Silberger, 285 Madison avenue, New York.

Evansville, Ind.—The Tri-State Paper Company has filed notice of company dissolution under state laws.



Illustrating the Puseyjones Two-drum Upright Reel

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Obituary

Arthur D. Gray

A. D. Gray, better known to the trade as Arthur Gray, died May the 6th at his home in Little Neck, L. I., in his forty-first year. His first connections in the paper trade was with the International Paper Company in Maine, where he worked as a mill hand, educating himself at his leisure moments.

As a salesman he was first connected with the Dennison Pratt Company of Boston in about 1918 and was later made a partner in this firm, opening a New York Office for them which he operated very successfully for about four years. From late in 1921 until the middle of 1923 he was associated with several paper jobbers in this city. In 1923, having made unusual success during the war and post war period in the newsprint field, he became interested in the Florida real estate field. In 1923 he went to Florida and was very successful there as he had been in the news print field. He was in Florida for two and a half years.

Many newspapers were enabled to publish big editions during the war period only through the energetic efforts of Arthur Gray in inducing mills formerly making every conceivable kind of other papers to making news print and also by importing thousands of tons of news print from abroad.

Upon his return from Florida he had the misfortune of having a compound fracture of his leg, and it will be interesting to know that while confined to his bed for practically eleven months he conducted the sale of many tons of box board made by a Maryland manufacturer, which not only paid all his expenses during this period but also permitted him to lay some aside.

At the time of his demise he was on his way home from the mill of the Marathon Paper Company where he had been conferring with the officials for representing them in the New York market.

Arthur Gray was regarded as one of the best posted men in the paper trade, and therefore commanded unusual respect.

He was known to be very generous and always most considerate of his friends.

He is survived by a wife and one daughter as well as mother, father and brother.

The funeral services were held in Little Neck on May 9 and the remains were taken to Bellows Falls, Vermont, for interment.

Arthur Gray will indeed be missed by all who knew him.

J. G. Ashley

MINNEAPOLIS, Minn., May 16, 1927.—J. G. Ashley passed away on the morning of May 9, 1927 at the Asbury Hospital in Minneapolis after an illness of one week. Born at Lennox, South Dakota, aged 42 years. At the time of his death he was Manager of the Printing Paper Department of the Minneapolis Paper Company, of Minneapolis. He had been connected with the Minneapolis Paper Company for eighteen years. He had hosts of friends in the Eastern Paper Industry. He was a member of the Minneapolis Club of Printing House Craftsmen, and had served in the United States Army during the World War as 1st Lieutenant.

George Bishop Sudworth

WASHINGTON, D. C., May 12, 1927.—George Bishop Sudworth, nationally known tree expert of the United States Forest Service, is dead. Mr. Sudworth was sixty-three years old. He was graduated from Michigan University in 1885 and entered the government service in 1886. He was the author of many books on the flora of various states. He was a member of the Washington Academy of Sciences, the Biological and Botanical societies of Washington, the American Forestry Association and the Society of American Foresters.

John B. Stroup

WILLIAMSBURG, Pa., May 16, 1927.—John B. Stroup, superintendent of the Williamsburg, Pa., plant of the West Virginia Pulp and Paper Company, died at 7:15 o'clock Monday morning, May 9, at his residence in Williamsburg. Mr. Stroup's serious illness began about six months ago, since which time he had not been actively engaged about the plant.

He was born July 15, 1862, at Sharpsburg, Pa., and in 1880, at the age of 18, began his career as a papermaker at Tyrone, Pa., with the Morrison, Bare & Cass Paper Company, later known as Morrison & Cass Paper Company, and which concern subsequently merged with West Virginia Pulp and Paper Company.

Mr. Stroup was a resident of Tyrone for twenty-six years, and in 1906 when the West Virginia Pulp and Paper Company took over the Williamsburg paper mill, was transferred from the superintendency of the Tyrone plant to similar duties at Williamsburg, which he continued until his death.

Surviving are his wife and one son, both at home. Funeral services were held at the home at 2 o'clock Wednesday afternoon, May 11, interment following in the family plot at Tyrone.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 17, 1927.—The Government Printing Office will receive bids on May 23 for 44,100 pounds (700,000 sheets) of 24½x32 white ground wood mimeograph paper. Bids will also be received on the same date for 36,500 pounds (18,450 sheets) of various sizes best quality binders board and for 10,000 pounds of green calendered tag board in 24 inch rolls.

The Government Printing Office has received the following bids for 80,000 pounds of No. 2 quality 25x20—No. 20 binders board: R. C. Osburn & Co., $65.60 per ton; Mathers-Lamm Paper Company, $65.45; Barton, Duer & Koch Paper Company, $64.90; Whitaker Paper Company, $63.75; Dobler & Mudge, $65.00; Consolidated Paper Company, $66.00; and Commercial Engineering Company, $74.00.

The Government Printing Office will receive bids on June 6 for the purchase of paper shavings, waste paper, etc., that may accumulate at the Printing Office during the fiscal year beginning July 1. The estimated quantities of material includes the following:

Shavings from blank books, and clean waste (white and colored), 40,000 pounds.

Shavings from book papers and clean waste (white) 600,000 pounds.

Shavings from book papers (white and colored), mixed with colored cover paper trimmings, etc., 500,000 pounds.

Printed waste, free from ground wood, 600,000 pounds.

Postal card waste, including trimmings, not printed, 400,000 pounds.

Wrappers from rolls and flat stock, etc., 2,800,000 pounds.

Cuttings from strawboard, etc., and other binders boards, 200,000 pounds.

Twine and rope from bundles, 15,000 pounds.

Discarded publications, etc., 175,000 pounds.

News print and news print shavings, not printer or colored, 200,000 pounds.

Paper Index Number for April

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 17, 1927.—The wholesale index number for April for pulp and paper was 154.8 compared with the same figure for March and 175,3 for April of last year taking 1913 at 100 per cent according to the Bureau of Labor Statistics, Department of Labor.

Use a Carthage Chipper then a Carthage Chip Screen Next put rejections in a

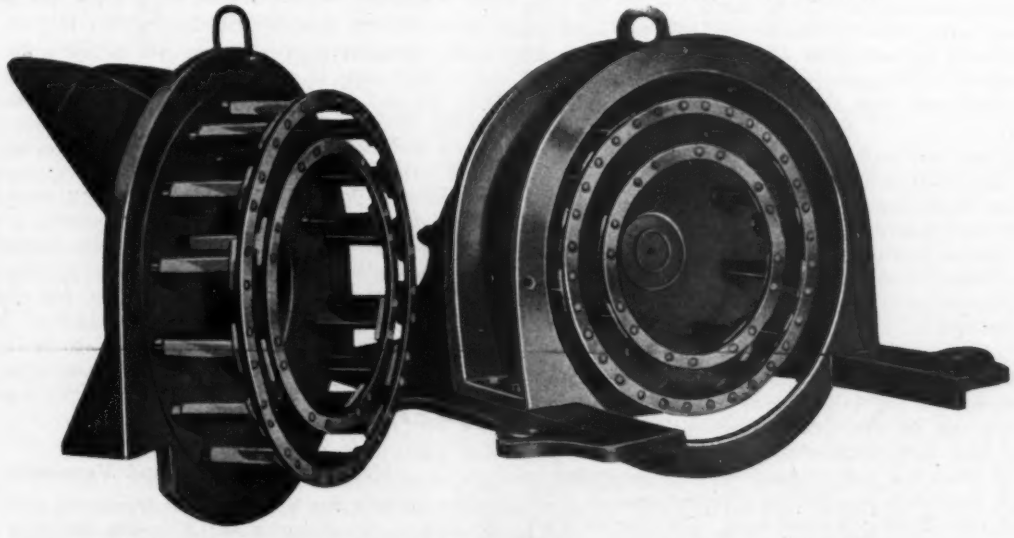
CARTHAGE CHIP CRUSHER

Modern Methods

If you would improve digestion, improve the quality of your chips. Most losses can be traced to knots, shives and poor chips—which use up a lot of acid without giving any return. Start right. Use a Carthage Chipper. Next screen by the rotary process with a Carthage Chip Screen. Then make use of the Carthage Chip Crusher to break up chips and screen rejections.

Evenly spaced pins in the Carthage Chip Crusher make chips the same length as those produced by the Carthage Chipper.

You can "get at" a Carthage Chip Crusher. The design is very simple and the results are well worth while. You should have the Bulletin. It's fully descriptive.



Carthage Machine Company

Manufacturers of Pulp and Paper Mill Machinery

CARTHAGE, NEW YORK

BELLEVILLE, ONT., CANADA

984

New York Trade Jottings

G. Frank Steele, the well known news print specialist, of 33 West 42nd street, New York, is spending a few days in Montreal, Que., this week.

* * *

The regular weekly luncheon and meeting of the Salesmen's Association of the Paper Industry was held last Monday at the Canadian Club, New York.

* * *

George D. Bearce, engineer of the News Print Service Bureau, has returned to headquarters after an inspection trip of the Northern New York mills.

* * *

M. J. Scanlan, vice-president of the Powell River Company, Ltd., of Powell River, Vancouver, B. C., and Minneapolis, Minn., was a prominent New York visitor last week.

* * *

The Deutsch Brothers Manufacturing Company, manufacturers of tissue paper products, announce the removal of their office to 141 West 20th street. Their telephone number is Watkins 4819.

* * *

Parsons & Petit, of 63 Beaver street, New York, selling agents for the Freeport Sulphur Company, have just issued their annual statistical card on sulphur, pyrites and sulphuric acid, which includes sulphur production, imports, exports, prices, etc., for 1926.

* * *

Nathan Adler has rented the entire store and basement at 106-110 Seventh avenue, through to 206 West Seventeenth street, for the O. R. M. Realty Company, Oscar J. Mayer, president, represented by Spear & Co., to the Capital Paper Company, wholesale distributors of paper.

* * *

Containing complete statistics for the month of April, the News Print Service Bureau Monthly Bulletin No. 112 was issued on May 13, this being the earliest day of the month the bulletin has ever been published. This record reflects great credit on the staff at 342 Madison avenue, New York.

* * *

Application has been made by the Certain-teed Products Corporation to list 93,000 additional shares of no par common on the New York Stock Exchange. The stock will be used, according to Wall Street reports, in connection with plans for the acquisition of one or two companies in the building supply field. Negotiations looking to the absorption of the Glidden Company, paint manufacturers, and Congoleum-Nairn, Inc., have been under way for some time.

* * *

The meeting of the recently organized Waste Merchants' Association of New York City at the Broadway Central Hotel, last week definitely put the association on record as approving a change in the New York city classification of mixed papers. The committee, of which Sol Ash is chairman, have undertaken to recommend to their trade two packings of mixed paper, a No. 1 repacked and a No. 2 ordinary mixed paper. The repacked grade will take the place of container manilas. Morris Kay, of the Sterling Mill Supply Company, presided. The next meeting will be held at the Broadway Central Hotel on May 17.

Contract for Clearing Pulp Plant Site Let

[FROM OUR REGULAR CORRESPONDENT]

HOQUIAM, Wash., May 12, 1927.—James Coyne of Port Townsend was the successful bidder for the contract of clearing of the site of the Grays Harbor Pulp and Paper Company mill on the old National Mill Company's property here. Work will start at an early date.

Great Floods Not Due To Deforestation

[FROM OUR REGULAR CORRESPONDENT]

Owing to the numerous references to the effects of deforestation on great floods that have been made during the current discussion of the causes and remedies of such floods as now prevail in the lower Mississippi Valley, the National Lumber Manufacturers Association points out some "popular misconceptions."

So far as deforestation has any important relation to floods of the present magnitude, it is almost entirely confined to deforestation for agricultural purposes. The impossibility of evacuating the population of the eastern half of the United States and reforesting all the farms of the forest regions of the Mississippi River Valley is so obvious that flood remedy in that direction is ridiculous.

So far as the operations of the forest industries in these regions is concerned, it may be stated as a general proposition that brush and second growth trees come in so rapidly that within two or three years the cut-over land is as absorbtive and retentive of rainfall as the original forest. It is true that in some instances timber cutting operations have been followed by such a series of fires that the return of vegetation has been virtually prevented. Bad local erosion and runoff conditions are thus created, but they are scarcely a drop in the bucket when considered with respect to such a disaster as the present one in the lower Mississippi Valley.

Finally, even in a state of primeval forest the flood regulation capacity of forests is largely local and absolutely disappears in periods of abnormal precipitation. The sponge effect of the forest floor has its saturation point; when that is reached additional rainfall runs off the forest cover just as quickly as off bare rock. That is why the great floods attained as high stages a hundred years ago as they do now. Manifestly, fundamental control of the extraordinary floods in the Mississippi Valley is something far beyond all possible reforestation, which has already been clearly indicated in a statement by Secretary Hoover.

The forest industries in no way seek to belittle the importance of a forest cover as a means of preventing or checking soil erosion, the rapid runoff of ordinary precipitation and local and even regional drainage irregularities, such as alterations of too high or too low water, but they want to make it plain that there are limits to what can be done in the way of curing consequences of deforestation, principally because deforestation, especially in the valley of the Mississippi and its chief tributaries, is mainly for agricultural purposes, and, therefore, inevitably permanent.

Despite the popular conviction that there is an intimate connection between deforestation and the great floods that come now and again in the Mississippi Valley, the actual facts of the situation were classically developed twenty-five years ago by General Chittenden of the Army Engineer Corps. His conclusions have been generally accepted by hydraulic engineers, foresters and meteorologists ever since.

Paper for Columbia and Venezuela

The United States is the foremost supplier of paper and paper products to both Colombia and Venezuela, according to a trade bulletin issued today by the Paper Division of the Commerce Department. In the case of the former country Germany is a close second but falls considerably behind in its exports to Venezuela. In 1925 American paper and paper products shipped to those markets were valued at respectively $360,000 and $281,000.

The United States, the report reveals, is the source of most of the high-grade writing papers, bristol, tissue and toilet papers used in Colombia and Venezuela while Germany is stronger in the cheaper writing papers, news print and wrapping paper. Cigarette is an important item in the paper imports of both these countries, ranking next to news print in the Venezuelan imports. Most of this paper comes from Spain.

Blazing the Trail

EVERY age has its trail blazers—those inquisitive beings with an urge to enlarge the horizon of human knowledge. Some have put out to sea in frail shells of boats, powered with oars, their course recorded for others through spoken word and uncertain memory. Some have shouldered flintlock and axe to wrest new breathing space for civilization from unfriendly aborigines and unwilling nature.

And some explore new fields of thought, braving prejudice and tradition, fighting their ways through ignorance and fear of change. For mankind's desire is to go ever forward into the unknown—toward the eventual unknowable.

The broken twig, the slash in the tree, the cairn of stones—all have served to mark the advancing step of man's progress. But they are records that must stay where they are put, while today's trails run into the intangible things of the mind's accomplishment. So the newer trails are blazed with records of paper, permanent, portable, and adaptable.

Hammermill Paper Company

Erie, Pennsylvania

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending March 31, 1927 and for the Three Months Ending March 31, 1927 as Compared with Corresponding Months of Previous Year

IMPORTS—PAPER

	March				Three Months Ending March 31			
	1926		1927		1926		1927	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Paper and manufactures (total)	.....	$12,008,663	.....	$12,237,474	.....	$32,249,835	.....	$34,613,788
Printing paper—								
Standard news print ....lbs...free	316,799,723	10,687,801	333,063,429	10,948,971	837,144,178	28,475,346	933,686,152	30,891,913
Imported from—								
Finland	4,367,082	136,915	6,406,054	179,825	7,552,053	226,531	17,048,847	493,414
Germany	2,871,300	91,055	1,934,471	61,817	13,233,263	388,051	3,963,595	122,679
Norway	592,889	17,780	3,148,632	82,173	1,278,338	38,409	10,219,372	275,233
Sweden	6,812,281	212,914	17,845,416	495,049	22,947,485	709,822	42,970,971	1,240,335
Canada	302,096,398	10,227,139	303,728,856	10,130,107	773,638,044	26,517,944	844,870,857	28,248,765
Newfoundland and Labrador	.....	.....	.....	.....	17,884,201	573,857	14,440,152	506,272
Other countries	59,773	1,998	.....	.....	610,794	20,732	172,358	5,215
All other, n. e. s....lbs...dut.	874,622	46,618	603,346	28,694	2,728,404	140,879	2,413,891	117,358
Grease-proof and waterproof papers..lbs...dut.	255,783	37,381	127,442	19,567	513,437	81,503	452,607	77,561
Kraft wrapping paper ....lbs...dut.	305,058	13,290	799,466	35,560	2,101,543	89,104	1,877,864	85,318
All other wrapping paper ....lbs...dut.	498,137	73,092	673,654	33,684	1,289,267	120,093	1,706,179	82,062
Writing, drawing, bond, etc.....lbs...dut.	377,353	77,831	286,026	62,459	976,159	194,287	651,659	152,205
Surface coated ....lbs...dut.	201,773	78,847	143,682	60,692	480,834	189,866	489,509	184,157
Tissue paper ....lbs...dut.	210,887	107,389	269,502	150,444	707,789	322,333	770,522	427,398
Pulp boards in rolls....lbs...dut.	7,680,952	187,264	5,366,002	132,513	20,365,446	500,537	13,375,947	330,143
Other paper boards, n. e. s.....lbs...dut.	.....	59,073	.....	101,246	.....	163,792	.....	269,616
Cigarette paper, cigarette books, and covers ....lbs...dut.	600,465	156,966	654,831	183,906	1,921,344	526,234	2,065,647	604,560
Hanging paper ....lbs...dut.	438,855	69,875	413,153	75,510	1,016,944	196,711	988,548	219,097
Paper boxes ....lbs...dut.	231,359	96,435	127,552	89,951	539,199	258,481	470,844	302,038
Pulp or papier-mâché and manufactures of, n. e. s. ....lbs...dut.	136,444	26,353	198,942	26,001	80,628	121,502	773,717	119,220
Duplex decalcomania, not printed....lbs...free	37,980	9,761	50,912	11,511	139,109	35,499	154,398	36,790
All other ....dut.	.....	280,687	.....	276,765	.....	833,668	.....	714,152

WOOD PULP

Mechanically ground wood pulp.....tons..free	21,800	647,177	21,202	638,302	64,909	1,884,358	48,971	1,446,387
Sulphite wood pulp ....tons	67,289	4,607,051	64,353	4,348,680	219,286	14,431,798	222,335	14,614,078
Unbleached ....tons..free	38,738	2,338,963	35,798	2,042,959	145,209	8,432,355	148,715	8,713,154
Bleached ....tons..free	28,551	2,268,088	28,555	2,305,721	74,077	5,999,443	73,620	5,900,924
Imported from—								
Finland	3,231	191,165	6,904	348,470	8,822	463,488	19,086	1,035,368
Germany	9,341	630,522	5,882	436,929	21,031	1,406,665	16,323	1,187,900
Norway	6,405	522,561	6,546	512,579	17,651	1,405,303	17,793	1,375,607
Sweden	6,363	434,152	13,043	838,738	58,529	3,586,350	79,711	4,947,303
Canada	38,887	2,619,695	27,786	1,938,162	102,058	6,921,639	78,948	5,398,184
Other countries	3,062	208,956	4,192	273,802	11,195	648,353	10,474	669,716
Sulphate wood pulp, unbleached (Kraft pulp) ....tons..free	20,263	1,316,557	22,167	1,399,956	66,396	4,232,527	75,169	4,726,047
Imported from—								
Finland	882	48,249	735	40,695	2,686	149,166	1,681	93,927
Norway	530	35,570	1,045	63,300	1,728	112,771	2,616	158,968
Sweden	4,897	282,951	8,042	482,739	23,698	1,430,230	38,003	2,324,052
Canada	13,105	894,390	12,345	813,222	36,778	2,452,481	32,649	2,136,687
Other countries	849	55,397	.....	.....	1,506	87,879	220	12,413
Sulphate wood pulp, bleached.....tons..free	630	40,633	143	9,373	4,053	274,371	6,333	416,427
Other pulp ....tons..free	221	8,516	68	7,912	398	18,512	615	45,697

CRUDE PAPER STOCK

Rags for paper stock....lbs...free	60,570,586	1,353,417	37,057,568	739,442	136,644,596	3,313,410	98,330,727	2,083,526
Waste bagging, waste paper, etc.....lbs...free	13,727,010	293,545	6,651,593	93,803	33,476,546	687,177	18,870,639	275,633
Old rope and all other paper stock....lbs...free	8,325,587	409,538	5,829,718	183,278	20,032,405	1,024,275	14,643,160	427,551

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS

Colors, dyes, stains, color acids, and color bases, n. e. s....lbs...dut.	280,143	295,286	447,735	517,551	1,123,014	1,274,922	1,890,569	2,157,071
Imported from—								
Belgium	16,767	24,158	14,624	15,908	54,335	85,550	60,357	87,380
France	15,672	23,378	16,664	20,115	80,802	105,100	36,153	47,623
Germany	33,852	27,553	281,797	322,051	419,991	457,842	1,190,135	1,296,044
Italy	7,547	7,569	5,325	6,782	23,777	24,321	19,142	19,128
Switzerland	168,598	178,267	100,148	122,940	469,414	521,047	499,792	618,252
United Kingdom	23,661	19,147	26,262	23,909	49,495	46,003	57,705	57,185
Other countries	14,046	15,214	2,915	5,846	25,200	35,059	27,285	31,459
Casein or lactarene ....lbs...dut.	3,513,755	297,817	2,182,962	247,800	6,559,150	568,017	7,707,657	887,897
Kaolin, china, and paper clay.....tons..dut.	56,050	532,436	18,007	175,053	97,645	948,996	68,703	686,542

(*Continued on page 44*)

BRONZE PIPE FITTINGS

for *Resistance to Acids* used in Paper Making

We manufacture a complete line of Pipe Fittings for resistance to various Commercial Acids. These fittings are available in screwed and flanged patterns.

For years we have "Specialized" in the production of various non-ferrous alloys to meet the destructive effect of Commercial Acids used in the "process industries". This broad experience enables us to recommend the "best metal" for each particular condition.

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PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 42*)

EXPORTS—PAPER

	March 1926 Quantity	March 1926 Value	March 1927 Quantity	March 1927 Value	Three Months Ending March 31 1926 Quantity	Three Months Ending March 31 1926 Value	Three Months Ending March 31 1927 Quantity	Three Months Ending March 31 1927 Value
Paper and manufactures (total)	.....	$2,349,941	.....	$2,549,897	.....	$6,564,066	.....	$6,808,101
Printing paper—								
News print paper ....lbs.	2,949,448	141,480	3,296,466	153,287	10,750,155	504,726	7,764,160	358,358
Exported to—								
Canada	108,067	9,809	572,372	33,828	153,468	13,908	788,264	49,202
Central America	153,292	6,935	40,818	2,229	376,860	17,179	150,639	7,650
Mexico	190,872	9,290	122,437	4,359	322,684	17,259	208,270	8,923
Cuba	275,560	12,950	704,135	32,357	2,079,439	87,517	1,106,234	51,337
South America	743,143	34,123	462,436	20,072	2,384,421	112,289	1,971,687	83,292
China, Hongkong, and Kwantung	833,458	35,344	93,000	2,340	2,822,384	132,562	286,120	16,651
Japan	311,295	16,014	.....	.....	899,831	41,750	21,955	932
Philippine Islands	154,233	9,284	1,015,341	40,224	1,135,546	51,916	2,754,338	110,925
Other countries	179,528	7,731	285,927	17,878	575,522	30,346	476,653	29,446
Book paper, not coated ....lbs.	1,552,152	155,365	982,965	91,931	3,866,203	383,586	4,005,680	337,245
Exported to—								
United Kingdom	4,872	598	1,123	306	21,194	3,198	1,553	421
Canada	230,024	28,262	208,691	19,252	653,384	74,763	848,330	72,159
Central America	66,058	6,461	17,284	1,785	185,021	17,853	89,181	8,745
Mexico	189,163	21,058	40,4777	3,629	466,818	48,675	128,035	13,403
Cuba	288,946	26,979	108,709	9,979	540,850	52,340	450,958	39,403
Argentina	101,236	8,799	155,225	12,384	148,347	13,991	337,247	26,729
Other South America	154,339	13,556	79,728	6,393	409,579	41,366	876,769	61,334
China, Hongkong, and Kwantung	115,317	10,995	86,068	9,185	522,900	43,271	259,316	23,087
Philippine Islands	219,690	18,937	80,663	7,592	483,907	40,962	344,366	27,995
Australia	22,448	2,870	59,745	8,189	121,566	13,697	263,054	25,455
Other countries	160,059	16,850	145,252	13,237	312,637	33,470	406,871	38,514
Cover paper ....lbs.	157,774	25,615	149,151	25,915	398,243	66,377	379,217	67,202
Grease proof and waterproof paper....lbs.	280,993	37,911	179,545	27,522	554,707	79,520	463,460	65,470
Wrapping paper ....lbs.	2,832,981	241,005	2,807,035	194,751	7,895,012	598,468	8,288,796	579,097
Surface coated paper ....lbs.	310,946	46,810	1,008,742	118,146	1,723,599	206,372	2,090,704	255,768
Tissue and crêpe paper ....lbs.	277,286	76,275	309,298	78,636	818,355	223,792	999,393	223,601
Toilet paper ....lbs.	376,997	45,308	568,850	68,835	1,113,691	137,224	1,268,852	161,584
Paper towels and napkins ....lbs.	134,423	21,360	170,968	27,473	459,746	61,904	453,815	69,203
Box board ....lbs.	5,090,330	140,935	3,611,274	118,457	11,466,046	323,960	12,486,637	377,141
Bristols and bristol board....lbs.	113,499	14,225	176,828	24,316	312,132	43,942	721,792	51,743
Other paper board and straw board....lbs.	3,642,546	181,051	3,665,154	179,192	8,878,827	485,960	9,408,499	470,626
Sheathing and building paper....lbs.	785,957	37,539	1,419,138	54,030	2,505,406	118,029	3,533,672	146,335
Wall board of paper or pulp....sq. ft.	1,957,450	63,636	3,119,560	115,705	4,801,076	161,980	11,458,200	386,936
Blotting paper ....lbs.	381,472	48,959	275,490	32,211	918,202	114,603	860,525	97,096
Filing folders, index cards, and other office forms ....lbs.	54,725	18,883	114,718	29,453	245,881	63,548	346,337	84,175
Papeteries (fancy writing paper)....lbs.	69,808	28,725	50,245	12,940	133,008	51,191	122,505	33,219
Other writing paper ....lbs.	823,165	141,269	958,131	199,810	2,106,332	379,911	2,486,549	461,529
Paper hangings (wall paper)....yds.	3,640,471	77,309	3,927,403	82,246	10,152,819	227,764	10,711,652	216,541
Paper bags ....lbs.	1,006,767	89,818	1,743,593	154,495	3,143,464	292,831	4,179,519	357,100
Boxes and cartons....lbs.	2,227,058	139,286	1,747,190	121,237	5,053,763	345,465	4,656,407	315,510
Envelopes ....lbs.	191,575	34,429	218,032	35,082	567,790	113,871	680,532	112,467
Vulcanized fiber sheets, strips, rods, and tubes ....lbs.	516,679	138,692	389,576	125,365	1,423,809	394,063	1,123,991	354,600
Manufactures of vulcanized and indurate fiber ....lbs.	13,429	6,362	54,876	15,010	85,829	34,560	114,827	31,665
Cash register and adding machine paper....lbs.	135,515	14,351	146,024	15,085	433,703	46,469	394,123	43,998
Other paper and paper products	.....	383,343	.....	448,767	.....	1,103,950	.....	1,149,892

WOOD PULP AND PAPER STOCK

Sulphite wood pulp ....tons	1,811	135,205	1,770	108,853	5,352	362,933	4,873	299,202
Soda wood pulp ....tons	80	4,856	51	3,743	470	43,975	318	28,016
Other wood pulp ....tons	626	65,934	39	1,475	1,820	320,654	536	22,425
Rags and other paper stock....lbs.	15,683,345	233,420	17,067,965	235,228	44,543,468	636,750	48,547,284	672,892

PAPER AND PULP MILL MACHINERY

Paper and pulp mill machinery....lbs.	1,001,929	240,469	1,410,323	298,462	2,601,470	671,441	7,335,684	1,457,528

F. B. Chapman Made Assistant Purchasing Agent

[FROM OUR REGULAR CORRESPONDENT]

FORT EDWARD, N. Y., May 16, 1927.—Frank B. Chapman, recently promoted from agent of the Three Rivers Mill of the International Paper Company to assistant manager of the purchasing department, has had wide experience in the papermaking industry. Mr. Chapman has assumed his new duties as assistant to George E. Smith, manager of the purchasing department. He is one of the oldest I. P. employees in point of service, having been with the company since its organization.

His first position in the industry was as a conveyor boy in the Fort Edward mill, this being in 1896, the mill at that time being owned by the Glens Falls Paper Company. His experience extends to practically every department of papermaking. He was employed at various periods in the ground wood mill, the finishing department, and the screen plate department, being employed in the latter department in 1898 when the Glens Falls Paper Company was acquired by the International Paper Company.

His employment with the I. P. Company at Fort Edward included service in the beater room, as third hand on the paper machines and later in the positions of stock clerk, timekeeper, second clerk, first clerk and agent. He was appointed agent of the Fort Edward mill in 1909 and served in this position for nine years. In 1918 Mr. Chapman was appointed agent of the Fall Mountain mill, remaining here until 1926, when he was promoted to be agent of the Three Rivers Mill, at Three Rivers, Province of Quebec, Can.

Mr. Chapman's career with the International Paper Company is believed to be one of the most unusual and interesting of any of the present employees of the company. He has a large circle of friends in the industry, all of whom unite in extending congratulations and wishing him success in his new position.

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ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

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A PIONEER IN WASTE ELIMINATION

An astute correspondent in Boston, in replying to the question, "Can you mention any methods of saving waste in manufacturing?" profoundly answers, "I guess so."—PAPER TRADE JOURNAL, May 1, 1873.

TO IMPROVE STATISTICS

There has been considerable criticism concerning the lack of standardization in statistics as reported for various grades of paper and pulp because due to the many methods now in force, it has been more or less difficult to determine accurately the consumption trends for many grades of paper.

The determination of such trends is of exceeding value in planning for future expansions or production programs and has come to be of vital importance to a great many mills.

In many cases, there is a lack of current statistics while in others, grades are grouped in such manner that changing classifications have made it almost impossible to determine accurately trends of production, consumption, capacity, etc.

The tariff problem is one which may arise any time in the future and it is the duty of the American Paper and Pulp Association as well as each individual mill to prepare the industry statistics in such form that they will be acceptable at face value by the Government. For the same reason the statistics are essential in combatting certain measures now before the State Legislatures and other Committees for the protection of the industry. These are but a few of the reasons for such changes in statistical procedure but in themselves they are sufficient for the move now under way.

Certain of the present group associations have long since more or less successfully settled their statistical difficulties. But even among such groups now well organized there is the lack of standardized methods which make proper comparability with other grades very difficult. This situation is recognized and acknowledged by practically all members of the industry and a definite move to correct the underlying faults has begun.

It was early recognized that proper results could be obtained only by men representing all grades of paper whose qualifications through experience and ability had been tested and proved.

The American Paper and Pulp Association, under the direction of Dr. Hugh P. Baker, executive secretary, and the supervision of Paul S. Hanway, statistician, acting under a resolution of its executive committee, arranged for a meeting attended by many of the ablest statistical men in the paper and pulp industry.

The following were invited to attend the initial meeting of this committee on April 8, 1927: C. B. Morgan, S. D. Warren Company; R. S. Kellogg, News Print Service Bureau; G. A. Ware, News Print Service Bureau; E. O. Merchant, G. H. Mead Company; A. J. Stewartson, Wrapping Paper Manufacturers Service Bureau, Jessup & Moore Company; Grellet Collins, Dill & Collins Company; Stanley Byron, Hammermill Paper Company; H. C. Scott, International Paper Company; M. C. Dobrow, Writing Paper Manufacturers Association; Grafton Whiting, Paperboard Industries Association; Henry A. Dickie, Paperboard Industries Association; D. A. Wilcox, Oxford Paper Company; C. E. Dobson, Southern Kraft Association; J. R. Hinkson, Hampden Glazed Paper and Card Company; Mortimer B. Lane, Survey of Current Business, Department of Commerce; D. A. Crocker, American Paper and Pulp Association; T. J. Burke, Cost Association of the Paper Industry; O. M. Porter, Glazed and Fancy Binders Board, United States Pulp Producers Association; P. S. Hanway, American Paper and Pulp Association.

The attendance at this first meeting was most gratifying. Fifteen were present, including Mortimer B. Lane, Editor, *Survey of Current Business,* Department of Commerce.

In addition, letters were received from four others who found it impossible to attend that meeting, but who offered cooperation in the work as outlined.

C. B. Morgan, treasurer of S. D. Warren Company, was elected chairman of the meeting. It was explained to the committee by Mr. Hanway that it was neither the intention nor the desire of the Association to conflict in any manner with the present statistical methods of the various Associations in the paper industry but to promulgate a plan which would make for greater clarity, standardization and value in statistical procedure for the paper and pulp industry as a whole.

Inasmuch as practically every major group of the paper and pulp industry was represented at this meeting, it was felt that each grade should be considered separately in recommendations made and that such suggestions be approved by the proper authorities because of such representation.

The results of this first meeting were considered to be very satisfactory. Committees were appointed to prepare resolutions concerning the following:

1. Standardized form for production capacity which would also be the normal production capacity of the plant. This would eliminate present methods of numerous and diversified forms or methods of establishing normal capacity and make for a uniform method so that hereafter reports to the Association for all grades of paper would be on the same basis.

2. An annual census for paper and pulp products in more comprehensive form to give recognition to grades of paper which merit classifications and which have up to the present been more or less overlooked.

3. Revision of present form of wood pulp and pulp wood census report.

4. Request an annual census of converted papers by the Bureau of the Census.

5. Centralized report forms on a unified basis to be received through the American Paper and Pulp Association and the Association's monthly reports on paper and wood pulp to be changed to correspond with the new forms.

6. The question of contract orders, blanket orders, orders received, etc., and the determination of the most logical method for reporting such orders in a uniform manner.

These are some of the major subjects discussed and referred to committees and they include some of the most important items in a statistical revision from the standpoint of future value. These committees are actively operating at present in preparation for the next major group meeting on May 18 when composite proposals will be offered to the Committee for final approval as recommendations of the paper and pulp industry.

The subject is one of vital interest. It merits the cooperation of every mill in the paper and pulp industry.

Recognizing the importance of the subject, the Department of Commerce has appointed A. H. O. Rolle, of the Division of Manufacture, Bureau of the Census, to cooperate with the committee in helping them by suggestions and experience in determining which forms would be most suitable, not only to the Government but to the industry as a whole. Cooperation of this kind brings the Government and the industry into closer relationship and beneficial results cannot help but result. Considerable help has already been received from the various departments at Washington and the promise of further cooperation is very gratifying to the industry.

News Print Production For April

Production of news print in Canada, according to the News Print Service Bureau, during April, 1927, amounted to 166,460 tons and shipments to 168,511 tons. Production in the United States was 130,236 tons and shipments 129,010 tons, making a total United States and Canadian news print production of 296,696 tons and shipments of 297,521 tons. During April, 15,179 tons of news print were made in Newfoundland and 1,247 tons in Mexico, so that the total North American production for the month amounted to 313,122 tons.

The Canadian mills produced 73,081 tons more in the first four months of 1927 than in 1926, which was an increase of 13 per cent. The United States output was 39,948 tons or 7 per cent less than for the first four months of 1926, that in Newfoundland 10,985 tons or 20 per cent more, and in Mexico 663 tons or 16 per cent more, making a total North American increase of 44,781 tons or 4 per cent.

During April the Canadian mills operated at 85.4 per cent of rated capacity and the United States mills at 87.2 per cent. Stocks of news print paper at Canadian mills totaled 26,389 tons at the end of April and at United States mills 24,105 tons, making a combined total of 50,494 tons, which was equivalent to 3.8 days' average production.

M. J. Cornell Presented With Gold Watch

CARTHAGE, N. Y., May 16, 1927.—M. J. Cornell, retiring superintendent of the Taggart Brothers Company paper mill at Deferiet was presented with a gold watch by his associates and employees at a farewell function in his honor.

Mr. Cornell has been superintendent of the Taggart Mill for the past six years and has left for Edmonston, N. B., where he has accepted a similar position in the mill of the Fraser Companies, Ltd.

Allies in Destroying Forests

Fire and insects are often close allies in the work of destroying trees in the forests, says the Forest Service of the United States Department of Agriculture.

A recent study of an area badly infested with the western pine beetle, according to forest officers, revealed that nearly four times as many trees were killed by the depredations of the insects in a burned-over tract as were killed in the adjacent unburned forest in the last two years.

The study was made by a Bureau of Entomology crew in the western part of the Modoc National Forest and adjacent lands in northern California. Insects are causing heavy losses in this region, about 75 per cent of the merchantable timber of which is in private ownership. In one patch of yellow pine of about 2,600 acres, separated from the main body of timber by open lands, a fire burned over some 1,000 acres on the fourth of July, 1924. Although the fire did not "crown," or burn in the tree-tops, throughout the entire area, the humidity was low and the heat so intense that a great many trees with their needles only partly burned died as a result of the fire. During 1925 and 1926 a great many of the fire-weakened trees in the tract succumbed to the attacks of insects, thus augmenting the fire loss. Cores taken from the green, fire-scorched trees showed a great slowing down in their growth following the fire.

The crew made a strip survey 10 chains in width and two miles long through the tract. It found that the average yearly loss for 1925 and 1926 was 300 trees killed by insects per section in the unburned area, while on the burned area an average of 1,120, or nearly four time as many were killed by insects per year on the area which had been burned over by the 1924 fire.

Activities of the Brotherhood

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., May 16, 1927.—Arthur Huggins, first vice president of the International Brotherhood of Papermakers, Thursday was ordered by President William R. Smith to proceed at once to Mechanic Falls, Maine, where trouble of a minor nature has developed between the paper company at that place and employees of the fire room. Mr. Huggins was ordered to Maine immediately after receipt by headquarters of a telegram from the local union at Mechanic Falls telling of the trouble. It is not believed to be of a serious nature and Vice President Huggins is expected to iron out the difficulty.

The board of canvassers of the Brotherhood which has been in session here for several days canvassing the vote cast by the various locals in the recent referendum, has been delayed in completing its work because of the many mistakes made by subordinate unions in making up the tally sheets. The result of the referendum in some cases may have an important bearing on future industrial relations in the industry. The vote on the various propositions is expected to be announced within a very short time.

The Papermakers' Building, which is located about a block from the State Capitol, was subjected recently to an unusual act of vandalism, a large brass nameplate attached to the front of the building having been stolen. The mysterious disappearance of the nameplate, which contained the name of the organization, has puzzled the authorities, who are inclined to believe the plate was taken by college students.

De Pere Paper Mfg. Co. Moves Chicago Office

[FROM OUR REGULAR CORRESPONDENT]

WEST DE PERE, Wis., May 16, 1927.—The De Pere Paper Manufacturing Company has moved into its new Chicago office in the Builder's Building, 165 West Wacker Drive, Room 1026. W. E. Scott is in charge.

The De Pere Paper Manufacturing Company now manufactures all grades of coarse paper, also a very high grade of water finished paper.

Production Insurance!

EVERY roll of Goodrich "1788 Highflex" in your storeroom is an asset, representing real dollars of saving in maintenance.

It is, actually, more than just a roll of belt. It contains hidden values that will make themselves more and more evident with passing months of trouble-free service; lower maintenance cost; fewer take-ups; less belt-dressing; fewer fasteners; full power transmission; fewer shut-downs; freedom from stretch; the satisfaction of knowing you have the best belting skill can build or money can buy; greater production; higher efficiency; greater profits.

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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

Deterioration of Rag and Sulphite Papers

May 16, 1927.

Mr. W. G. MacNaughton,
Secretary, TAPPI
18 E. 41st Street,
New York City.

Dear Sir:

Your letter to the editor of the *New York Times*, printed in the Paper Trade Journal for March 24, 1927 is very interesting, especially at this time when the subject of paper durability is being discussed from so many angles. However, the quotations from eminent authorities on the subject are so meagre as to be misleading and, perhaps, harmful. Therefore, I should like to offer the following further discussion of the subject.

In the early part of the report of the work carried on at the Swedish Testing Institute at Stockholm by Gosta Hall, he says, as quoted "Regarding tests on paper after eleven years, sulphite and rag papers had deteriorated to practically the same degree." But in order to bring out the thought of the report, there are two points which should be added:

First, a study of the remainder of the report brings out the fact that his degree of deterioration was measured by the *percent of loss of initial folding resistance*, and the *percent of increase* of copper number or Fehling reduction number. In his tables and graphs he shows that when he took from their commercial papers an all rag paper, a 50 per cent rag and 50 per cent sulphite paper, and an all sulphite paper and exposed all three to the sunlight under the same conditions and tested them periodically for loss of folding resistance and increase in the copper number, he found that all three papers had lost about the same *percent of the initial* folding resistance, the all sulphite paper being slightly the best of the three. But at every stage of the course of the deterioration, because of its high initial resistance, the rag paper is five to ten times as strong as the sulphite paper and, therefore, proportionately less likely to suffer from use.

The second additional point of interest in this report is the fact that, after an additional study of papers made on the experimental laboratory machine under varying conditions, Mr. Hall concludes that, "The deterioration of sulphite papers is due to the comparatively small resistance of the fibers, while the deterioration of rag papers is due mainly to the poor permanence of the tub sizing." And in his summary at the end of his report he says, "Paper made from bleached sulphite cellulose has weakened as regards its folding strength much more rapidly both under heat and light than paper made from rags, for which reason it must be considered proven that papers made from bleached sulphite possess less permanence . . .The ideal paper from a permanence standpoint should be made of carefully and moderately bleached rags."

Mr. Hall brings out another point of interest when he states in another place that "the permanence of a paper made from mixed fibrous materials is approximately the arithmetic means of the permanence of its components." But this statement could probably only be verified with any accuracy when rags of the same grades were compared. The custom in Industry in using new rag clippings for high grade permanent papers and old worn rags for mixed furnishes intended for semi-permanence would lower the resistance of papers made from mixed furnishes below that expected from the percent of rags used. This point was not covered in the report of Mr. Hall.

The statement quoted from Dr. Harold Hibbert is that "since the discovery of chlorine and the development of the modern steam laundry the quality of rag fibers has become materially lowered." There is no question of the truth of this statement when considering the use of old worn rags, but the makers of high grade papers today realize that in making papers intended for permanent records, only new rag clippings should be used, and those are so carefully sorted and selected that there is little to distinguish them from the rag fibers used by their ancesters.

Professor E. Heuser of the Riordon Pulp Corporation of Hawkesbury, Ont., is quoted as saying that "since, in the preparation of rags for paper, they must be boiled and bleached, the papers made from rags would have little permanence if the operation and precautions were not taken with *equal* care." In preparing a cotton rag for papermaking the problem is one of separating the individual fibers from the textile threads and removing the dirt, dye, grease, etc., which has adhered to its surface, whereas in the preparing of wood pulp, the lignin which has been intimately and firmly bound to the cellulose of the fiber during the growth of the tree must be removed. The great problem in the making of durable sulphite paper lies in the fact that the limit of tolerance between leaving traces of dangerous material adhering to the fiber and being drastic enough to injure the cellulose structure of the fiber during the treatment is very narrow. On the other hand, the very wide tolerance limits between the cleaning and the injuring of rag fibers has made manufacturers in some cases slow to realize the necessity for care in controlling accurately the cooking and bleaching process and occasions some of the disappointment of buyers of rag papers.

The ancient rag papers have been famous for their extreme durability whereas the earlier sulphite papers have earned their reputation for rapid deterioration. Therefore, it was generally believed that the basic material of a rag fiber was different from that of a wood fiber. Intensive study of the composition of the cellulose fibers and molecules has recently brought out the fact, which at first startled those familiar with commercial papers, that

the arrangement, kind, and number of atoms in the molecule of the wood fiber was exactly the same as the arrangement, kind and number of atoms in the molecule of the rag fiber. However, a study, through the microscopic of a slide prepared from a well beaten mixed furnish of rag stock and wood pulp would soon satisfy anyone that the direction and intensity of the forces which bind the molecules together to form the fibers were not alike in the two kinds of fibers. A rag fiber can be seen to have split into numerous long fibrillae from the mechanical abrasion indicating that, whereas the bonds holding the molecules into chains of fibrillae into the broader fibers were weaker and fairly easily destroyed by beater action. The fibers obtained from wood pulp, after similar mechanical abrasion, show no tendency to fibrillation, but either crush into a shapeless mass or break squarely across the fibers, indicating the weakness of the bonds binding the molecule in the lengthwise direction as well as in the crosswise direction of the fibers.

The reactions which occur during the making of a paper or later during the life of the paper are largely colloidal and adsorptive, that is, they are due to the play of the residual forces about the molecule and do not disturb the actual structure of the molecule. In the making of paper, the aim is to destroy just enough of these secondary, less resistant forces, to give the flexibility needed for formation, *but no more*. The destructive ageing of finished paper is due to the *continued* breaking down of the forces binding the molecules together and is brought about or aided by light, air, moisture, traces of iron, manganese, bleach residues, etc. Eventually probably after the loss of fiber structure, the molecules themselves may be altered and bring about in the paper a brittleness and discoloration.

The more strongly these residual forces are held in place by the molecules of the fiber, the less chance there is for breaking the bonds by sunlight vibrations, by traces of chemicals or by other agents, and the less free affinity do the molecules possess for attracting and holding destructive extraneous matter in such intimate contact with the fiber as to resist being washed away. Comparing wood and rag fibers as to their structure would make it seem improbable that the best of papers made in the future from wood ever have the age endurance of papers made with care from rags.

Yours very sincerely,
JESSIE E. MINOR,
Collins Manufacturing Company.

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Secretary of TAPPI,
18 East 41st Street,
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De-inking News Print Paper

A LOGICAL METHOD OF ATTACKING THE PROBLEM. A NEW KIND OF PRINTERS INK DEVELOPED.

WASHINGTON, D. C., May 16, 1927.—A new process to reclaim news print and make it available for use a second time by removing ink from the original printed paper is claimed to have been perfected in Germany, states a report to the Department of Commerce from Trade Commissioner W. T. Daugherty, at Berlin.

Heretofore the difficulty in deinking news print has been in the removal of the lamp black which is an important ingredient of the printers' ink as now produced. The German patent concerns the making of printers' ink under a different process whereby pyrolusite is used, which is fast to light and air. This pyrolusite is introduced into oil or color varnish. Without further treatment pyrolusite produces a brownish print, unwelcome to the trade, but this can be deepened to a black tone if mixed with certain fat-soluble light reducible organic colors. The preparation is then treated with sulphite or a 1 per cent hydrous sulphurous acid which, it is claimed, removes the black color completely within the space of one half hour. A light blue print which remains is said to disappear in the pulping process accompanying final regeneration to white stock. Although pyrolusite ink costs more than ink now used, the saving by news print regeneration effects a considerable cheapening of printing costs to publishers, according to the inventor, who also emphasizes the economic value attaching to timber utilization. The inventor claims that successful operation on his process has occurred on a large scale. The process producing the new printers' ink, is already patented in Germany, and American patents are pending.

According to reports one of the largest paper mills in Germany has made a practical run of this process, using 50 per cent of deinked paper and 50 per cent of new pulp. The principal difficulty in the way of the introduction of this process in America will, it is said, be the separation of papers using the new printers' ink from those that use the present ink.

Remodeled Furnaces Double Steam Production

An attractive illustrated booklet has just been issued by the International Combustion Engineering Corporation, New York, which describes the work of remodeling one of the large steam generating units at the Fordson plant of the Ford Motor Company.

As a result of rebuilding this unit, the capacity was more than doubled, and its peak production of 500,000 pounds of steam per hour, is claimed to be the greatest amount of steam that has ever been produced by a single unit.

Similar units in this plant are now being remodeled and eventually the capacity of the entire plant will have been doubled without any additional boilers. Copies of this publication will be sent upon application to the International Combustion Engineering Company, Madison avenue and 135th street, New York.

TAPPI Members in Carton Plants

The Technical Association has a copy of Kartonnager-Praktiker by W. Krumbeigel and R. Lange, published by Richard Lange, Verlag, Dresden. If any of the members wish to read the book it is available on request to the secretary.

Modern Drive for Board Machines

By S. A. Staege, Industrial Engineer, Westinghouse Electric and Mfg. Co.

Why use the felt as a belt? You would not cut a six or eight inch belt from a woolen press felt to drive a fan pump. Why then should you use the same delicate, fleecy, long nap, expensive woolen felt to drive the primary presses, cylinder molds, and breast roll as well as the squeeze rolls?

The felt is made from selected wool and is painstakingly woven by expensive machines to give the exact characteristics needed in the formation of a perfect sheet. Care is taken to secure the long soft nap and the open weave as well as many other scientifically developed characteristics to serve best in properly carrying the sheet, getting rid of the water and freeing itself from the dirt deposited in its surface.

If this fleecy felt were cut to the right width for a belt and used to drive the fan pump, it would not be long before the nap would be worn off, the fabric stretched to a mere rag and every strand of the weave drawn so tightly together that neither water nor dirt could pass through.

The felt was not designed for a belt. Yet in almost every cylinder machine this delicate and expensive woolen felt produced with infinite care is used to drive three or four primary presses and often the baby press rolls, as well as six or seven cylinder molds with their couch rolls on top, and heavy breast roll, felt rolls and many squeeze rolls throughout the length of the machine.

It is no wonder that the life of the felt is short, that the nap is soon gone. Soon it will not take up the water from the sheet and it is necessary to use more steam in the dryers and slow down the machine in order to dry the sheet. Finally, the felt must be cut off and replaced by a new one with much loss of time in the doing, in order to get out the production necessary to operate the machine at a profit.

Twenty-five to 50 horsepower is frequently transmitted through the first press felt as a belt in the case of cylinder machines, producing so high a tension in order to drag the various rolls that the fibrous strands of the woven felt are pulled tightly together and the dirt and water cannot go through. The fabric becomes almost impervious, terrific beating is required by the whipper in an effort to release the dirt, and this very rapidly wears off the nap and makes the felt useless for the purpose intended.

The two baby presses are usually driven by a slip belt in order to relieve the felt of some of the load, but this is a very unsatisfactory method and frequently in spite of the belt, the felt has to do most of the work in driving these rolls.

Numerous attempts have been made in the past to provide mechanical drive for the primary press rolls and cylinder molds, but none of these efforts have ever been entirely successful, since the varying stretch of the felt, and the relative speeds of the several molds and rolls require a delicately gradiented variation in speed—a variation which is not absolutely stable but should accommodate itself automatically to the changes taking place in the felt and other conditions. With the mechanical drive for these parts, there was no adequate means of telling how tight the felt was nor of maintaining the proper power input to take care of the requirements of the individual cylinder molds or primary presses without unduly straining the felt. Therefore, such methods of drive have been all but abandoned and only a few remain in existence.

It has remained for electrical sectional paper machine drive to offer the solution to this perplexing problem which has cost the paper mills hundreds of thousands of dollars annually.

Unlike the mechanical system, when electrical drive is used, we do not have to wait until a belt slips or breaks or a shaft is twisted off before we know how much power is being transmitted. Efficient electrical instruments measure or indicate the power to a nicety and may even be made to control automatically the power input and to do many other things far beyond the possibilities of personal control or mechanical discrimination.

It is through such means, simple but dependable, in connection with electric drive for the baby presses, primary presses, cylinder molds and breast roll, that we can automatically regulate and control the tension of the felt, limiting it to only that value necessary to properly carry the sheet and without demanding of it any mechanical work other than the maintaining of the desired tension.

Under such a system of drive the strain on the sheet usually resulting from the pull of the felt throught the rolls is entirely removed, the felt is left in its natural pliable, loosely woven form so that it can readily absorb the water and get rid of the dirt without unduly severe whipping, and the life of the felt with full production capacity is greatly prolonged.

To extend the use of electrical sectional paper machine drive to the individual units of the wet end of the cylinder machine, for increase in production, and to save hundreds of thousands of dollars to the paper mills, the Westinghouse Company several years ago after thorough investigation, developed a system of drive for the baby presses, primary presses, cylinder molds, breast rolls and even the squeeze rolls if desired, which completely meets all of the requirements of the application, and forms an integral part of the complete electrical sectional drive.

This method of drive and control has been in use by the Westinghouse Company on a cylinder machine for more than two years in continuous commercial operation and has amply proven the correctness of the idea and the adequacy of the system in every way.

Inasmuch as several small motors drive rolls, which operate on the same felt as the first press main, it is, of course, necessary that all of these motors start and stop together and operate at the correct relative speed to give the desired felt tension without throwing the actual driving load of these various parts upon the felt. Such an arrangement is provided so that the motors not only start and stop together and operate at the correct relative speeds and loads, but during the acceleration and deceleration, each motor contributes its own proportional torque during the starting up and stopping of the machine so that if one part or section of the wet end of the machine tended to start or stop more quickly than another, excessive load would not be thrown on the felt. This is an important detail, but one which has been developed to a satisfactory solution and no attention is required on the part of the operators unless a change in the tension of the felt is desired, in which case it is readily accomplished by a simple hand adjustment at the front side of the machine.

Under this system of drive, electrical instruments are provided which give an accurate indication of the tension of the felt between each pair of rolls or cylinder molds, provided with individual motor drive, so that the operator does not have to judge the tightness of the felt by its feeling or appearance.

It is in the meeting of such specific and difficult problems that electrical sectional paper machine drive often demonstrates its flexibility and adaptability to all kinds of paper machines and conditions.

The savings in the cost of press felts, in the case of cylinder machines, and the saving, or increase in production, are items of such magnitude that no mill can afford to overlook these enormous advantages of the electrical method of drive and control described. Not only do these specific advantages accrue from the use of individual motor drive and control for the baby presses, primary presses, cylinder molds and breast roll at the wet end of the machine, but large savings in power for the drive of the entire machine result from the use of sectional drive, and maintenance and lost production from drive sources are reduced to a negligible item.

Care and Application of Felts*

By W. J. Starkie

Care of Felts

An important point to bear in mind under this head is the store room. This should be light, airy and dry, but it is inadvisable to have it heated as moths are encouraged under such conditions and even in a few days may eat through several folds of a press felt.

It is a good plan where possible to take the felts from the bales when received and put them over wood rails that can be drawn up to the ceiling, so that air can circulate all round, and they are out of reach of such vermin as rates and mice.

It is also advisable to sprinkle liberally with naphthalene or camphor, which helps to keep down the breeding of moths. Never allow felts to lie for a long period against a wall or in corners —keep them moving.

When taking a felt from the store room for the machine, be sure that it is the correct type and size required before putting it on. Annoyance has many time been caused by neglecting this minor precaution. When ultimately the felt is safely got to its appointed place with all the felt rolls in position, run it slowly round dry with a minimum of pressure on the press rolls, in order that the creases which have been caused by the packing of the felt, are straightened out. When running satisfactorily in this condition, slacken back the stretching roll and turn on the water so as to wet the felt evenly all across. Owing to it having been previously stretched and dried under tension, as it becomes saturated with water, it rapidly shrinks back, and allowance for this must be permitted by the regulation of the stretching roll until a suitable working tension is reached. After this with a properly constructed felt, beyond a little stretching up now and again, there should be no great difficulty, but it should quickly settle down to producing good paper.

Felt Operation

In order that the felt should maintain its maximum porosity, it is essential that it should be kept out to its full widh. To enable the machine-men to see at a glance if this is being done, a colored guiding line is woven in, which should always appear as straight as possible, and what adjustments to the rolls can be made to achieve this end, should be attended to. Wormed rolls are, of course, used to keep the felt running straight and free from wrinkles, but care should be taken that the spirals are not too thick, as they cause an unnecessary amount of friction, which is prejudicial to the life of the felt.

Suction boxes may also help or hinder the durability, and still perform their essential function. These should be constructed so that the edges do not scrape the felt as it passes over, and the surface ought to be as smooth as possible where they come in contact.

These surfaces when made wholly of wood have a habit of wearing unevenly; therefore it is wise to have renewable strips of some suitable substance which forms the slot, when any uneven wear can be quickly and inexpensively remedied. Glass strips and various metals have been tried in this connection with, I believe, very good results.

Felt Rolls

On some of the older paper machines, in many cases, these are wooden rolls, and are detrimental to the life of the felts, owing to the surface becoming rough and uneven, which causes the nap to wear off very quickly. Vulcanite covered rolls have been found in many cases, to be good, because the vulcanite is "kinder" to the felts, and keeps its shape more uniform than that of wood, therefore increasing the life of the felts considerably. Both on the press and felt rolls the kinder you treat a felt the better results and longer life you will obtain.

Washing Felts

Too much attention cannot be paid to the method of washing felts. Almost invariably on modern news machines this process is done without removing them from the machine, and in a variety of ways, but I would suggest that the best method is where the felt can be thoroughly cleaned with as little friction as possible put on to it, as the surface is necessarily worn away where there is an excess of this.

In regard to felts for fine printings, esparto papers, etc., where these are taken from the machine for cleansing, the best method to adopt is that where a pair of squeeze rollers is used fixed over a tank of cold water, and the felts slowly and continuously run between. If it were convenient, instead of having the tank full of water to begin with, to have a weak alkaline solution added until the dirty felt was thoroughly saturated and run for some little time in this, afterwards being thoroughly rinsed with cold water; the felts would then come up softer and in better condition and with much less washing than is otherwise necessary. The washing with the old type of dash wheel, I do not believe to be good, as the felt is bundled up in one concentrated mass, and it is obvious that the dirt on the inside takes a considerable time to get through, and all the time that the machine is revolving, which is probably ten times as long as is necessary, there is a tendency to full the felt, consequently making it thicker and less porous.

The use of sulphuric acid in cleansing the felt is distinctly dangerous and is not calculated to help to preserve the structure of the woolen fiber, and if this is used, as it often is, and the felt is allowed to stand before every trace of the sulphuric is washed away, it undoubtedly jeopardises the life of the felt.

Drier Felts

Regarding the suitability of drier felts, this is largely dictated by the classes of paper which are being made. Their function is not only to carry the paper from cylinder to cylinder, but also to prevent the sheet from cockling when brought into sudden contact with the heated surface. A great amount of the moisture which the paper contains on reaching the cylinder has to be absorbed by or passes through the felts in the early sections of the driers; therefore it is imperative that these should be as porous as possible, consistent with a suitably fine surface which will not leave its impression on the paper.

The ordinary cotton drier felt, such as you are acquainted with, is very suitable for these positions, as, although it is a thick material, the interstices between the threads from which it is built up are so numerous that the steam passes quickly through.

A felt-drying cylinder over which the felt can pass is a great advantage and prolongs the life on these sections enormously, and also aids in quicker drying of the paper, as without such drier, the felt must necessarily become thoroughly saturated with moisture.

Where high grade paper is being made, I think it is advisable after the first sections, to use woolen drier felts. These felts are about the same thickness as the cotton ones, but owing to their method of manufacture, which is practically the same as that of the press felts (except that they are fulled for a much longer period, in order to obtain a solid fabric with a smooth surface), they are not so porous, but they do present a finer surface and hold the paper to the cylinder more efficiently. As well with these, it is advisable if possible to have felt driers, which prevent the felt from getting into a sodden state, when it is unable to perform its work in a proper manner, and owing to the nature of the fiber it is apt to deteriorate in strength by the constant heat and dampness.

When shutting down the machine, the felts should always be

* Paper presented before British Technical Section, March 16, 1927 (abstracted).

thoroughly dried before being allowed to stand, otherwise they will very easily burn. Attention should always be given to the felt rolls on the drying section, as any pitting of the surface of these will naturally pluck the surface of the felt and so cause rapid wear.

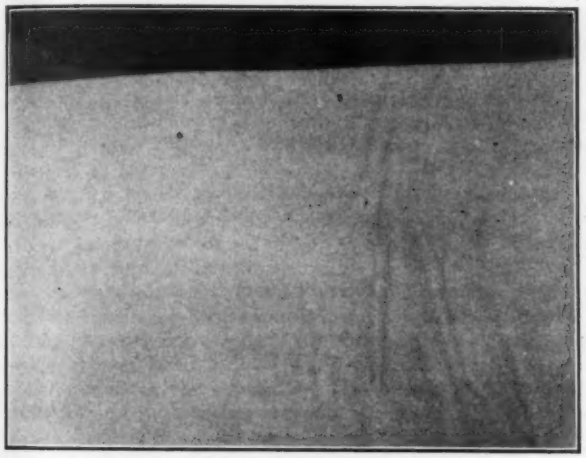
Drier felts of cotton with an asbestos face have recently been used with varying degrees of success. Whilst some papermakers believe they are the last word, others state that with the exception of the finishing drying section, where there is little moisture, they are not to be compared with the types previously mentioned.

My remarks on dry felts thus far have had reference particularly to printing and comparatively slow running machines. For the present day mammoth news machines a different drier felt is essential. When the speeds were attained at which these machines are run, it was found that the old type of drier felts, which are of the ordinary single-ply cotton duck, required overhauling. This has been done by the introduction of a multiple-ply fabric, which has proved to be far superior in drying capacity, finish of paper and lasting properties, as much as three times the life being not uncommon. A great advantage of this material is that practically all stretch is eliminated, and the tendency so prevalent in other and thinner driers to wrinkle is overcome; but even if a wrinkle should, through any circumstance, occur, it is comparatively easy to get this out and the felt again running perfectly straight.

What is the Cause of Creases?

A European member has sent the following inquiry regarding a condition that develops a few days after the sheets are packed with solid frames, with photographs to illustrate the situation.

"We are packing our woodfree printing and writing paper in bales with wooden boards on top and bottom, and when the bales



CREASES WHICH DEVELOPED

are opened up a few days later, the top and bottom reams show crease and crinkles as shown on the photographs which I enclose.

"We have taken care to dry the boards before using them and also saw to it that packing paper is absolutely dry. We have also wrapped the bales up in water-tight paper, but nothing helps, the creases always appear after a couple of days.

"I may add that when the paper is made today, it is generally baled the next day, perhaps this has something to do with it, but I cannot understand why. Could you give me a clue, and if not, do you think it worth-while to turn the question into a special inquiry for TAPPI?

"I shall be extremely grateful if you could give me a hint, as the creases sometimes appear half way the top or bottom ream."

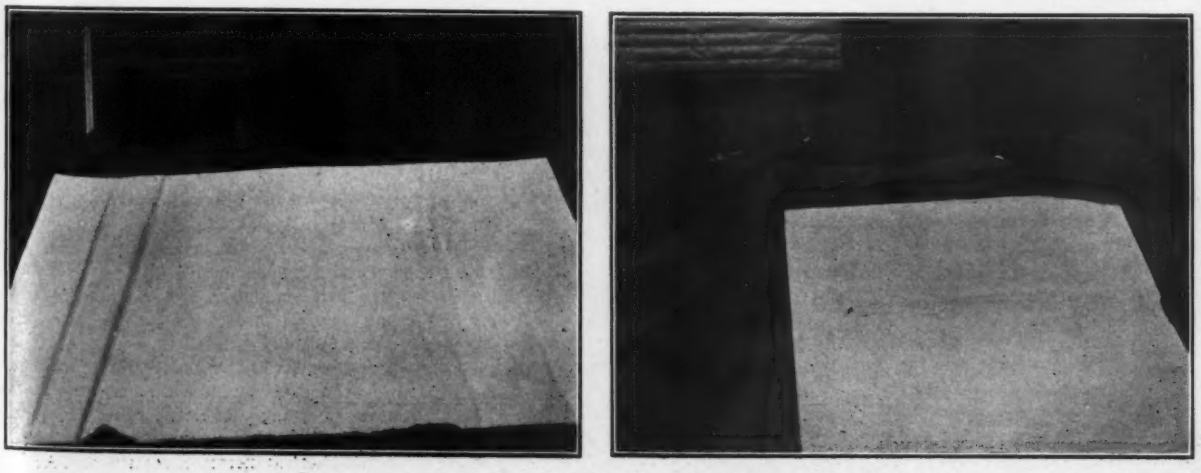
The photographs look exactly as I have seen paper that had been packed in wooden cases where green or insufficiently dried lumber had been used. I am inclined to believe that the cause is in the solid frames. The suggestion made is to make moisture tests of the boards, the paper as it is packed and the wrinkled paper after the condition has developed.

If tests showed a wide difference in moisture content between the paper and the wood frames, the cause would be indicated. The remedy would be to use kiln dried lumber and as a further precaution, a sheet or two of fiberboard and asphalted paper between the frames and the sheets.

As this is a very practical question, I would be glad to have letters in regard to the question. If a sufficient number is received to warrant incorporating these responses in a Special Report, I shall be glad to do so. Any reader of the PAPER TRADE JOURNAL is welcome to participate.

Send letters to

W. G. MACNAUGHTON, Secretary of TAPPI
18 E. 41st street, New York City.



CONDITION OF PAPER SHEETS AFTER TEN DAYS IN THE FRAMES.

Summer Courses in Pulp and Paper Making

The University of Maine, Orono, Maine, announces that as during many previous years it will conduct a number of courses in chemistry and pulp and paper manufacture from July 5 to August 12, 1927. The courses include the following:

Paper Technology

A lecture course on pulp manufacturing processes including equipment used, raw materials, flow of materials, etc., using TAPPI texts, Volumes III, IV, V.

Pulp Manufacture

Soda Process. Inspection and sorting of chips, preparation and analysis of caustic liquor, cooking charge calculations, cooking operation and controls, screening the pulp, determination of yield, bleach requirements, strength testing.

Sulphite Process. Preparation of acid and its analysis, the cooking operation and controls, determination of relief and sulphur recovery, stock washing and screening, bleach requirements, determination of yield, calculations of sulphur and lime consumption, strength testing.

Sulphate Process. Testing of liquors, yields, steam consumption, consumption of chemicals, etc.

Mechanical Process. Lectures with mill inspection.

Pulp Bleaching

Determination of bleach required for standard color, determination of rate of bleaching under varying conditions, the effect of stock concentration, agitation and temperature, determination of oxycellulose, determination of chlorine and permanganate numbers, etc.

Paper Manufacturing

Laboratory work. Beating, sizing, loading, coloring, slowness test, treatment of water, raw materials, examination of papermakers' supplies.

Paper Coloring

A study of properties and application of the various classes of aniline dyes and pigments used in paper coloring.

Paper Testing and Analysis

The important methods of the Technical Association of the Pulp and Paper Industry will be considered.

The courses in pulp and paper during the summer are designed to meet the specific needs of students who desire and are qualified to take pulp and paper courses. Pulp and paper mill men, salesmen, and executives with or without technical training, who have had practical experience and desire to gain a scientific understanding of the important phases of which they are unfamiliar.

Visits to Pulp and Paper Mills

The summer work is in charge of Dr. Charles Andrew Brautlecht, professor of chemistry, and the pulp and paper courses will be given by Paul DeCosta Bray, associate professor of chemistry in charge of pulp and paper work, who was for eight years chemist and assistant sulphite superintendent of the Katahdin Division of the Eastern Manufacturing Company. He will be assisted by John Caulfield, assistant instructor in paper chemistry and paper technology. Visits to all kinds of pulp and paper mills in the vicinity of Orono will be made on Saturdays. These will include groundwood, soda, bleached and unbleached sulphite and kraft pulp mills, as well as news print, specialty, fine writing and kraft paper mills.

Those interested in taking these courses should write at once to make reservations, to Prof. C. A. Brautlecht, Chemistry Department, University of Maine, Orono, Maine.

American-Scandinavian Interchange

Through the American-Scandinavian Foundation established by Niels Poulson of Brooklyn, in 1911, university students of United States on one hand and those of Denmark, Norway and Sweden on the other, have been enabled to spend a year abroad continuing their studies or doing special work in the universities.

In 1924 arrangements were made by the Foundation for industrial fellowships where specially selected young men of technical training were exchanged and placed in industrial plants where they were employed receiving a modest compensation sufficient to defray their expenses.

This year among the thirty-five young Scandinavians who will come to United States, one each from Denmark, Norway and Sweden, will be employed in paper mills; one at Bogalusa Paper Company, Inc., Bogalusa, La.; one at Marathon Paper Mills, Rothschild, Wis.; and another at Nekoosa-Edwards Paper Company, Port Edwards, Wis.

At a recent conference of James Creese, secretary of the Foundation, 25 West 45th Street, New York, W. G. MacNaughton, secretary, and R. S. Kellogg, member of the Executive Committee of TAPPI, it was planned to see what could be done here and abroad for a few young American technical men with some paper mill experience to go abroad under the Foundation as fellows and learn more of the Scandinavian practice in mills.

From informal talks with a number of Swedish and Norwegian paper mill men visiting here, it is believed that there will be no difficulty in placing four or five young men each year in Scandinavian paper and pulp mills.

While no definite arrangements can be made at this time, it is believed that they can be completed by the end of the year so that early in 1928 a number of young Americans could go abroad.

Those interested should communicate with

W. G. MacNaughton, Secretary of TAPPI
18 East 41st Street, New York.

As members elected towards the middle of the year are required to pay but half the annual dues in addition to the entrance fee, those contemplating membership should present their applications at once.

Members receive as part of the Association service a subscription to PAPER TRADE JOURNAL beginning when election is completed, also a copy of Technical Association Papers for the current year.

Secretary TAPPI,
18 East 41st street,
New York City.

Please send me application for membership and a list of members of TAPPI.

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Meters for Papermills*

By P. C. Muzzell

To papermakers perhaps a more interesting application of steam meters is in connection with the paper machines, because of the importance of control, effect on the products, and the clearly apparent influence of steam economy on the cost of production of the finished paper.

The steam meter's sphere of greatest usefulness is in indicating to the drierman the amount of steam going to the paper machine in order that the supply may be as uniform as possible. A large dial indicator for this purpose has obvious advantages. Indicators in use at a large newsprint mill were illustrated.

A possibility in connection with paper machines is the application of automatic control of the make-up steam. It is easily possible, by installing temperature measuring equipment in one or more cylinders of the paper machine to operate a small electric motor which would open or close the stop valve on the make-up steam pipe. This would not only operate the steam supply, but would also indicate the temperature of an important cylinder.

An interesting story may be quoted from the chief engineer of a mill producing newsprint. The plant was well equipped with instruments and included a steam flow meter measuring the total consumption of a machine room containing two machines. The average consumption per machine computed from the flow meter was considered quite satisfactory. At a later date, however, an additional steam meter was installed in order that the consumption of the machines could be measured individually. A vast difference in efficiency then became apparent, one machine proving remarkably economical and the other extravagant. The figures being 2.7 and 3.4 pounds of steam per pound of paper respectively, although both machines were making the same quantity and quality of paper. The result of this discovery was the institution of steps to elucidate the reason for the difference, and to bring the extravagant machine into line with the economical one. This desirable result has now been achieved and the two machines return figures around 2.7 and 2.9 pounds of steam per pound of paper.

The average weekly output of paper per machine is 400 tons so that the benefit of metering the steam is obvious.

Value of Records

Steam flow recorders are of exceptional value by their provision of automatically written records of all occurrence throughout the run of the machine on the steam supply to which they are installed. It may be stated incidentally that so characteristic are the records through their sensitivity that the charge engineer in this mill claims to be able to tell from a glance at the chart which drierman controlled the machine from which the record was taken. However, what is more to the point is that whilst the steam supply to the machines is controlled by drierman with the assistance of the indicators, the work of the drierman is kept under constant supervision by the distantly located recorders which faithfully register every fluctuation in supply. The chart record daily provides the following information:—

1. Length of run of machine.
2. Evenness of maintenance of steam supply.
3. Breakages of paper and time lost.
4. Time lost cleaning felts, trimming wire, etc.
5. Fluctuation in flow in pounds of steam per hour.

Daily practice in machine rooms equipped with flow meters is to scrutinize chart records and log integrator totals for the previous day's run.

By using such a system as this in conjunction with a steam costing system for the works it is suggested that cost of production could be more exactly calculated and enable some mills working a variety of papers to take on contracts which might appear to be rather dubious propositions in the absence of detailed costs.

Further information concerning steam production can be obtained from charts such as the record taken from a news machine. The average pressure in the driers is 7 pounds.

Interpretation of Chart

Average steam pressure in driers 7 pounds.

6.15 a.m.	Sheet off driers cleaning doctors.
6.20 a.m.	Steam reduces, cleaning doctors.
6.30 a.m.	Steamed returned to normal.
7.00 a.m.	Steam returned to normal.
7.35 a.m.	Pressure shut for darning felt.
10.30 a.m.	Paper break.
11.05 a.m.	Paper break.
12.18 p.m.	Paper break.
2.05 p.m.	Paper break.
2.32 p.m.	Paper break.
2.35 p.m.	Paper break.
3.30 p.m.	Paper break.
4.25 p.m.	Paper break.
6.00 p.m.	Steam reduced while felts are being washed.
6.30 p.m.	Steam returned to normal.
8.30 p.m.	Steam increased because speed of paper machine increased.
1.50 a.m.	Paper break.
4.20 a.m.	Paper break.
5.30 a.m. to 6 a.m.	Long break, jam in driers.

It may be mentioned that from particulars which have been collected it is found that metering steam to digesters generally produces an economy of about 10 to 17 per cent.

In one case a Scottish mill was troubled by unequality of products from the digesters, and without unduly advertising it to the staff installed a steam meter in this section. The results showed a wide divergence in methods of the operatives and varying steam consumption for the same products.

By educating their staff in the proper control of steam supply, a uniform product was obtained and also economies in steam consumed.

Metering is extending to the measurements of stock and this could be done with a flow meter where the stock is fed through a pipe on its way to the wires, and in the same percentage solution as fed to the wires. Prior to the final watering down its condition would be too homogeneous to make metering possible.

Where the stock solution is fed to the wires by means of troughs metering could be effected by a weir, but in this case it is probable that frothing would set up and make it inconvenient.

* Paper presented before British Technical Section, March 11, 1927 (abstracted).

Celotex Co. To Install Additional Claflins

LANCASTER, Ohio, May 16, 1927.—The Hermann Manufacturing Company has just shipped two of its largest size Timken Bearing Claflin Refining Engines to the Celotex Company, manufacturer of insulation and building board from bagasse at Marrero, La. This plant is the largest user of Claflin engines at the present time, having fourteen engines in operation, which are giving entire satisfaction.

F. V. Gunn To Distribute Wood Rosin

RICHMOND, Va., May 16, 1927.—F. V. Gunn & Co., of Richmond, well known distributors of naval stores, have been appointed distributors for the Hercules Powder Company. They will handle Hercules Steam-Distilled Wood Turpentine, Pine Oil, and Wood Rosin in Richmond and vicinity.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Bleaching

Pulp Bleaching Apparatus. R. B. Wolf. U. S. pat. 1,591,070, July 6, 1926.—To obviate the difficulty experienced heretofore in the formation of lumps in the pulp when bleaching at high densities, rotary bleachers, either globe or cylindrical, are provided with a number of stirring arms. Some of the arms are fixed to a stationary central shaft and others to the interior of the roatating shell. These arms are arranged in staggered relation and as the shell rotates they act as rakes to constantly agitate and stir the mass. The stationary shaft and the arms supported thereon are provided with passages for the introduction and withdrawal of air which is thus distributed through the pulp mass to ensure the most effective oxidation during bleaching.—A. P.-C.

Sizing

Aluminum Resinate in the Rosin Sizing of Paper. E. Oeman. Papierfabr. 24, 410-413 (July 4); 451-455 (July 25, 1926). A portion of the literature on the rosin sizing of paper is reviewed. The aluminum in the sizing bath acts as a mordant for the free rosin. The acid number of rosin (g. sodium hydroxide required by 100 g. rosin) usually amounts to 11-12. Aluminum resinate was prepared by adding potassium alum in excess to a clear solution of rosin in sodium hydroxide. The precipitate was washed and dried at the ordinary temperature. The ash content was 4.75 per cent. The precipitate was soluble in ether, benzene, carbon tetrachloride, but not in ether-alcohol. The preparation probably consisted of a free basic aluminum resinate mixed with free rosin acids. Upon heating, the air-dried material became darker as the temperature was elevated, and the percentage of free rosin acids in the ether extract decreased.—J. L. P.

The Influence of Glue Topsizing on the Properties of Rosin and Starch Sized Papers. E. Munde. Wochbl. Papierfabr. 57, 883-887 (Aug. 7, 1926). As a result of a number of tests on the surface sizing of papers, previously sized with rosin and starch. the conclusion is drawn that in general the properties are enhanced by the subsequent glue treatment. Strength tests, such as stretch, bursting strength, and folding endurance, show a noticeable increase. The thickness, the substance weight, and the transparency properties are also increased. The apparent and actual specific gravities, as well as the porosity, of the sheets remain practically the same. The sizing properties is increased considerably.—J. L. P.

The Filling and Sizing of Paper. H. Roschier. Papierfabr. 24, 348-350 (June 6); 363-365 (June 13); 384-388 (June 20, 1926). Recent theories concerning the use of fillers and sizing agents in paper are reviewed. Tests show that paper fillers are retained partly mechanically by filtration and partly as a result of the precipitation of the rosin and the aluminum hydroxide The H ion concentration has considerable influence on the filler retention. This value is rapidly increased as the pH is varied from 4 to 5.6 and remains nearly constant from 5.6 to 7. Adsorption phenomena play a secondary role with fillers. Retention with both sized and unsized papers increases with the particle size. The necessity for standardizing fillers according to their degree of dispersion is emphasized.—J. L. P.

Paper Size. W. C. Lodge. Can. pat. 261,906, June 22, 1926.—Finely divided mineral matter is mixed with water, wax is added and intimately mixed.—A. P.-C.

Paper Size. J. A. deCew. Can. pat. 260,716, May 11, 1926.—A colloidal solution of aluminum resinate is produced by dissolving a resin soap in a protective colloid, dissolving aluminum sulphate in a protective colloid, and mixing the solutions.—A. P.-C.

Device for Sizing and Coloring, and Impregnating Paper Sheets on or Off the Paper Machine. B. Kremler. Ger. pat. 427,531, Wochbl. Papierfabr. 57, 572 (May 15); Papierfabr. 24, 323 (May 23); Zellstoff U. Papier, 6, 275 (June 1926). Paper in sheet form, whether on or removed from the machine, is passed over rolls arranged to size, color, or otherwise spray the web.—J. L. P.

Manufacture of White Vegetable Glue. W. Leonhardt. Ger. pat. 412,125. Papierfabr. 24, 323 (May 23, 1926). Starch is decomposed by means of an alkali under reduced pressure.—J. L. P.

Fillers and Coating Materials

Asbestine. H. Postl. Papierfabr. 24, 398-402 (June 27, 1926). The mining, refining, and applications of asbestos and asbestine in the paper industry are discussed.—J. L. P.

Paper Filler. H. R. Rafsky (now Rafton). U. S. pat. 1,598,-104, Aug. 31, 1926.—A mixture of extremely finely divided calcium carbonate and magnesium hydroxide is used as paper filler. —A. P.-C.

Coating

Use of Glue in Coated Paper. George K. Hamill, V. H. Gottschalk and George W. Bicking. Tech. Papers U. S. Bur. Standards 20, 635-666 (1926); Paper Trade J. 83, No. 19, 42-44 (Nov. 4, 1926). The result of an extended research on coated paper by the Burau of Standards in cooperation with the National Association of Glue Manufacturers lead to the following conclusions: (1) The proportion of glue required in coating mixtures varies almost inversely with the grade of the glue chosen, and the amount of the better-grade glues required may be less than that of casein. (2) The use of glue introduces no new difficulties in the preparation and application of coating mixtures containing either neutral minerals, such as clay and blanc fixe or alkaline substances such as satin white. (3) With proper selection of the glue used and adaptations to local conditions and product requirements, the use of glue requires little change in equipment and involves little change in operating technique from procedure with casein. (4) The various types of glue available permit considerable latitude in choice within which local conditions may be met. (5) Variations in the other materials employed in coating procedures influence largely the proportion of adhesive required to produce coated papers of satisfactory printing qualities. (6) The use of ordinary glue-bound coated paper offers no new difficulties to the printer and engraver, at least as regards printing processes other than lithographic and possibly offset processes where a high degree of water resistance is required. (7) The need for an extraordinary degree of waterproofnes and of water resistance in coated paper for other than some lithographic and offset work is questionable. (8) Uniformity in glue for coating processes may be attained by drawing up specifications to meet local and product requirements. A bibliography of 32 references is appended.—A. P.-C.

Coating Paper and Similar Materials. Dr. Baumgärtner, Katz & Co., Ges. Eng. pat. 241,876, Oct. 27, 1924. In coating vessels or plates of paper pulp with size, gelatin, casein, mucilage or the like, the articles are first moistened with an aqueous solution of ammonia or other alkaline substance or such a solution is added to the coating medium, to improve penetration and retention of the coating. The Alkaline solution may contain salts which

will react with precipitating media in the sizing liquor to form phosphates, flourides, sulphides or oxides and the sizing may contain formaldehyde or other suitable hardening or preserving agents.—A. P.-C.

Drying

Paper Structure and Drying. P. Klemm. Wochbl. Papierfabr. 57, Sondernummer 92-98 (June 12, 1926). The paper drying operation is not limited to the removal of water, but some of the important properties of the sheet are determined at this stage of the manufacturing process. The effect of the dewatering process on the construction properties of the sheet, as well as its texture, is comprehensively discussed.—J. L. P.

Evaporation Relations on the Dry End of the Machine. E. Oeman. Papierfabr, 24, Festheft 42-48 (June 5, 1926). The average quantity of heat per square minute and per hour transferred to the paper web on the drying cylinder in a rapid running paper machine is calculated; a heat transmission coefficient of 200-400 is thereby obtained. For a given time, after one-half of the water has been evaporated, the mean temperature difference is between the cylinder and the paper. The possibilities of increased heat transfer to the sheet are discussed. The varying surface temperature on the driers is determined.—J. L. P.

Device for the Continuous Indication and Recording of the Moisture Content of the Web on the Paper Machine. E. K. Wilson and E. A. Rees assignors to F. C. Huyck and Sons. U. S. pat. 1,589,450, June 22, 1926. The moisture content of the web as it travels through the machine and variations therein are measured by passing an electric current through the web from one side to the other and indicating the resistance offered by the web to the passage of the current. One of the electrodes consists of a roll over which the paper passes, while the other is preferably constructed of a thin sheet of flexible phosphor bronze, the lower end of which is slit to form a series of fingers which are weighted and which rest upon and ensure electrical contact with a large surface of the paper sheet. Provision is made for moving the upper electrode across the width of the sheet to obtain the moisture content at various points. Indicating and recording devices may be installed where convenient. A number of instruments may be provided at different points of a machine to measure the progressive elimination of the water and permit of adjusting operating conditions so as to eliminate the water most economically. In order that the meter may give true indications of the moisture content regardless of the conductivity of the mill water supply, provision is made for compensating any changes in the latter. To this end there is provided a calibrating element consisting of two electrodes adapted to be connected into the circuit in place of the web of paper, and between which is circulated some of the machine back water. A double-throw switch serves to connect either the web or the calibrating element into the circuit.—A. P.-C.

Pulp and Paper Testing

Annular-Oblique Illumination for the Microscopy of Surface Texture. Lloyd A. Jones. Paper Trade J. 83, 56-65 No. 16, (Oct. 14, 1926). The author discusses the mechanism of the illumination of relatively smooth surfaces, such as paper and textiles, for making critical and comparative microscopical examinations of the surface irregularities, explaining why so-called "vertical" illumination is of little value. Oblique illumination should be used, and instead of a point source or a parallel beam an annular source having a relatively large vertical extension should be used. The amount of detail brought out varies with the angle within which the illumination is incident, i. e., depends on the height of the annular source of light; and there is a certain height (which varies with different materials and with different samples of the same material) at which optimum results are obtained. In order to obtain comparative results on different samples, it is therefore necessary that visual observation be carried out under light conditions that are known, identical and reproducible, and that in photographic work in addition to identical illumination there should be identical exposure and development of the negatives and prints. With negatives or paper made with different batches of emulsion, it is necessary to determine for each batch the development time required to give the desired value in order to obtain an identical rendering of brightness contrasts. An apparatus is described in which these observations have been embodied giving an annualar-oblique illumination, and in which the effective height of the annular source of light can be readily adjusted. It is constructed so as to be conveniently suitable for either visual observation or photographic work. Photographs of different paper surfaces are given and discussed, showing the importance of the effective height of the source of light in bringing out the detail. The examples serve to illustrate the type of results that can be obtained by this method of illumination and emphasize strongly the necessity of standardizing the illumination if comparable results are to be obtained.

The Control of Stock Concentration. H. Schwalbe. Wochbl. Papierfabr. 57, Sondernummer 70-72 (June 12, 1926). The Herdey method of determining stock concentration by centrifuging the stock in glass containers in an electric centrifuge, and subsequently drying it at 100 degrees C. is described. The procedure is modified to the extent that 100 cc glass containers for the centrifuge are used, and are filled to the 80 cc. mark with the pulp mixture and 20 cc. of "glanz" oil (containing 50 per cent Turkey red oil) as an antifoam agent. The glasses are whirled for 4 minutes at 2,000 revolutions per minute. The height of the pulp deposit is a measure of the stock concentration. J. L. P.

Freeness Tester for Pulp. A. B. Green. U. S. pat. 1,594,941, Aug. 3, 1926. This patent covers certain modifications of the Schopper-Reigler freeness tester, embodied in the well-known Green tester, concerned with the container for the stock. It provides a top and bottom cover, the latter equipped with a pet cock. When making a test the bottom cover is closed, the measured stock poured into the container, the stock is thoroughly stirred. the top cover (with cock open) is closed, the cock is closed, the bottom cover is opened, and the cock is opened to allow the stock to drain. In this way drainage is started only after the stock has been thoroughly stirred, and after the drainage once begins the stock is undisturbed until the operation is complete.—A. P.-C.

The Naumann-Schopper Bending Tester. Anon. Papier 29, (Sept. 1926). A test piece 50 mm. wide is held in jaws, the inner walls of which are at an angle of 180 degrees. By turning a hand wheel the lower jaw is given a rotary motion, and the upper jaw, which carries a weight pendulum, offers a resistance equal to the bending strength of the test piece. It therefore only partially follows the displacement of the lower jaw and the angle between the two gradually decreases. The test is continued until the test piece breaks, and the scale reading gives the bending resistance in kilos and the bending angle in degrees, the latter being the maximum angle to which the product can be bent. The curve between the resistance and the bending angle is automatically recorded. The advantages of the instrument are briefly discussed. (The instrument is patented under U. S. pat. 1,559,466 granted to Schopper, Oct. 27, 1925).—A. P.-C.

The Elmendorf Tearing Apparatus. H. Tschudi. Wochbl. Papierfabr. 57, 964-965 (Aug. 28, 1925). Descriptive of the Elmendorf tearing tester.—J. L. P.

The Bursting Strength Tester. K. Fechel. Papierfabr. 24, 294-205 (May 16, 1926). To obtain comparative values for the bursting strength of papers of different weights using the Mullen tester, the author calculates the bursting strength referred to a basis weight of 10 g. per square b. The resulting values are "relative" in comparison to the "absolute" ones given directly by the tester. In the operation of the mullen tester the glycerine must extend to the rubber membrane, otherwise too high values will be obtained. The membrane stretches on use, and should be renewed every two months.—J. S. P.

The Eastman Colorimeter. W. Brecht. Papierfabr. 24, Festheft 72-86 (June 5, 1926). American methods for measuring the color of paper are reviewed. A description of the construction and operation of the Eastman Universal Colorimeter, with particular reference to its use in ascertaining the color components of paper, is given. The color analyses of 10 differently colored papers are discussed. Description is given of the Jones graphical method for interpreting the colorimeter readings. Other possible applications of the instrument are (1) a numerical determination of the two-sidedness of paper, (2) to establish a relation between paper two-sidedness and the color of the waste water, (3) measurement of the whiteness of pulps, and (4) a numerical determination of the fading of paper. Compare abstract in C. A. 20, 2071 (1926).—J. L. P.

Whiteness Measurements on Bleached Pulp Samples. H. Wenzle. Papierfabr. 24, 409-410 (July 4, 1926). In the determination of the whiteness content of bleached pulps by the Ostwald penumbra photometer, the following rules should be observed: (1) Only air-dried samples should be employed. (2) The pulps must possess a weight of over 400 g. per square m.; thinner samples are translucent and yield false results. (3) The pulps must possess a smooth surface; felt marks affect the accuracy of the readings. Tighly compressed pulps should be moistened, smoothed, and carefully dried before placing them in the photometer. For the estimation of whiteness, a separation of the yellow and red shadings is necessary, and for this purpose three color filters, each of which is standardized spectorscopically and possesses a definite spectrum, should be used in the apparatus. J. L. P.

The Influence of Illumination on Standard Colors. H. Weisz Wochbl. Parierfabr. 57, ..35-839 (July 24,1926). The use of daylight spectacles is recommended as an aid in matching colors under artificial light or so-called dry-light lamps. J. L. P.

Manipulation of the Apparatus for Testing the Elongation of Paper in Water. K. Fenchel. Papierfabr. 24, Festheft 98-103 (June 5, 1926). A description of the new Schopper water-elongation tester for paper. The stretch properties of paper, either after immersion in water or exposure to moist air, can be ascertained with this apparatus. Actual tests on samples immersed in water for one minute and then allowed to stretch for three minutes are reported.—J. L. P.

The Modern High Power Microscope and the Photographic Ocular "Phoku" of Prof. Siedentopf. E. Belani. Wochbl. Papierfabr. 57, 595-599 (Mau 22) 647-651 (June 26, 1926). The application of the modern high power microscope, together with its numerous accessories, to the pulp, paper and allied industries is described.—J. L. P.

Recent Results on the Strength Determination of Paper Pulps. H. Schwalbe. Papierfabr. 24, 465-468 (Aug. 1); 481-483 (Aug. 8, 1926.) Chiefly a discussion of the results of Ruhlemann, Cameron, Miller, von Posanner, and others on the strength determination of pulp for the manufacture of paper. A list of 21 references is appended.—J. L. P.

Standard Paper Control 1913-1925.. W. Herzbery. Wochbl. Papierfabr. 57, 887-888 (Aug. 7); Papierfabr. 24, 505 (Aug. 15); Zellstoff U Papier, 6, 356 (Aug. 1926). A review. Statistical. J. L. P.

Control Testing of Wood and Pulp. E. Parke Cameron. Can. Chem. Met. 10, 255-257 (Nov. 1926). Discussion of the difficulties inherent to the sampling of wood and of pulp and of the difficulties in carrying out and interpreting the results of the analyses and tests from the standpoint of their value in the pulp and paper mill.—A. P.-C.

Paper Specialties

The Precursor of Paper as a Carrier of Type. H. Castorf. Wochbl. Papierfabr. 57, Sondernummer 8-10 (June 12, 1926). Descriptive of a decorative frieze, by H. W. Schmidt, which pictures the manufacture of paper in olden times. Located in the German Museum at Munich.—J. L. P.

Production of a Fat Impervious Parchment Substitute. A. St. Klein. Zellstoff u Papier, 6, 355 (Aug. 1926). Supplementary to an article of similar title by K. G. Mattas in Pappers Och Travtid. No. 8 (1926). A table is given showing how the stretch of fat impervious parchment on various parts of the machine varies for the weight of a sheet 43 to 79 g. per square m. Power consumption data for the Billerud paper mill are given.—J. L. P.

Process for Fireproofing Organic Substances, Such as Fibrous Materials, Textiles, and Paper. H. Stelling. Ger. pat. 429,918, Papierfabr. 24, 511 (Aug. 15, 1926). The material to be treated is exposed to an atmosphere of silicon chloride in the presence of water. A coating of silica acid is formed.—J. L. P.

Process and Device for the Coating of Paper Sheets with Metal Leaf Cork, Etc. Firma Further Blattmetallwerke J. Henrich. Ger. pat. 429,278. Papierfabr. 24, 394 (June 20); Wochbl. Papierfabr. 57, 867 (July 31, 1926). An apparatus is described for the deposition of metal leaf, cork, etc., on gummed paper in sheet form.—J. L. P.

Process for the Manufacture of Fibrous Materials Especially Paper Containing Rubber. 24, 461 (July 25, 1926). A vulcanized rubber suspension in water, especially latex, is mixed with fibrous materials and then congulated.—J. L. B.

Cellophane. Anon. Wochbl. Papierfabr. 57, 998-999 (Sept. 4, 1926). A brief description of the process of manufacturing cellphane.—J. L. P.

Process and Device for the Manufacture of Hollow Paper Articles. F. Foy. Ger. pat. 428,416. Papier Fabr. 24, 511 (Aug. 15, 1926). By means of a suction arrangement a hollow article is formed from paper stock in direct contact with warm mercury.—J. L. P.

Developments in Straw Board Manufacture. F. J. J. Driesens. Wochbl. Papierfabr. 57, 681-684 (June 19), 736-739 (July 3, 1926). A general discussion of straw board manufacture.—J. L. P.

Practical Hints in Paper Board Manufacture. C. Url. Papierfabr. 57, 988-990 (Sept. 4) 1072-1074 (Sept. 25, 1926) Paper board manufacturing difficulties are discussed from a practical standpoint.—J. L. P.

Use of Perfumes in the Paper Industry. Am. Metagrin. Papeterie 48, 722,725 (Aug. 10) 769-770 (Aug. 25) 821-822 (Sept. 10); 917-921 (Oct. 10, 1926). Description of the use of perfumes in the manufacture of incense papers, scented papeterie, and scented wrapping papers for special uses, e.g., tobacco.—A. P.-C.

Tracing Cloth and Paper. J. Halden and Co. Ltd., and W. A. Halden. Eng. pat. 255,570. Tracing paper or tracing cloth is provided with faintly applied characteristic markings extending over the area on which the drawing is to be made and of such a character that they will not interfere with the discernment of the drawings; but are not removable without injuring the drawing, and will faintly reproduce photographically when contact prints are made on sensitized paper. The markings are intended to serve to identify the author of the drawings in the original or in any reproduction thereof. They may be printed lithographically or applied by transfer methods.—A. P.-C.

Hand Made Paper Industry in India Tekumalla Venkajee. Paper Trade J. 83, No. 18 101-104 (Oct. 28, 1926). A description of the native process.—A. P.-C.

Molded Articles from Rubber and Fibrous Materials. F. Kaye U. S. pat. 1,600,047, Sept. 14, 1926. Paper is mixed, while in the beating engine, with a latex such as rubber, balata, or gutta-percha, together with a coagulant, excess moisture is afterward removed on a paper-making machine, the soft sheets formed are disintegrated the resulting material is used for making molded or pressed articles.—A. P.-C.

Copying and Printing Paper. N. Sulzberger. U. S. pat. 1,592,394, July 13, 1926. In copying printed and other matter prepared with soluble ink, thin asbestos paper is placed over the matter to be copied and the asbestos paper is moistened with benzol and the product so obtained is then treated with sodium silicate and a cellulose ester solution.—A. P.-C.

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Problems in Applied Budgeting*

G. M. Pelton, Swift & Co., Chicago

A discussion of the subject, "Problems in Applied Budgeting" necessarily requires our giving attention to the three fundamental functions in the management of industrial concerns:

1—Financing, that is, the securing and use of necessary funds with which to conduct the business.

2—Merchandising, that is, the buying of raw materials and supplies and the selling of finished products.

3—Operating, that is, the manufacturing and distribution of the finished products.

In other words, it is fundamental that all industrial concerns should be so organized, managed and accounted for from combined merchandising, operating and financial standpoints, that they may render satisfactory service to the public, and earn proper returns on the invested capital of the stockholders, or proprietors.

Now, making a profit in any business or industrial organization would be relatively simple:

1—If the selling prices of the finished products, the costs of raw materials, and the merchandising expenses could be definitely determined by the management.

2—If operating costs could be fully controlled, and

3—If the financial costs, and final results, could be fully regulated and determined.

But, such a condition does not and cannot exist in competitive lines of business and industry, because the factors just referred to are largely governed by the law of supply and demand, and the forces of competition. All businesses are dependent in final analysis on the wants of the ultimate consumers and their ability to pay for values received. Naturally their wants, desires, and ability to make purchases change from time to time, thereby creating changes in prices, which are expressions of the values consumers put on goods and services.

From an economic standpoint, four classes of persons are directly and vitally interested in any business or industry, and should be considered by the management of any business organization in developing a budget program:

1—The producers of raw materials.

2—The consumers.

3—The employees or wage earners.

4—The investors and creditors who supply the required capital.

The relationships between these classes of persons are expressed in prices, wages, and profits. The difference between the prices paid by a manufacturer for raw materials and the prices realized in the sale of finished products, represents the gross margin of profit or loss. This margin should be sufficient to cover operating wages and all expenses incurred in plant operations and selling and administrative expenses; and financial costs and requirements, including such items as interest on borrowed funds, dividends to stockholders, federal taxes, etc., and leave a final balance to be carried to surplus for working capital and expanding needs of the business. And, this should be accomplished by some means or other, if possible, in spite of the fact that keen competition usually exists in every phase of business, such as in the buying, selling, operating, and financing.

Problems in Applied Budgeting

Now it is my understanding that you have been giving considerable attention to the principles of budgetary control, and that the purpose of this meeting is to consider some of the problems in applied budgeting. Of course, you all realize from experience, that many difficulties are encountered in attempting to apply budgets, particularly in certain types of business. Stripped of all psychological and general angles, however, it would seem that these problems may be summarized somewhat as follows:

1—What should be done to develop and maintain sound financial structure, and what structure will be needed to best meet future requirements.

2—What is the estimated and required merchandising and operating program which will best fit in with the financial requirements?

Difficult as it is to satisfactorily work out budgets in most lines of business along the lines suggested above, this difficulty is materially increased in many types of business, such as those carrying on operations of a seasonal nature; those in which the supply of raw materials and prices of finished products cannot be fairly definitely determined; those dealing in products subject to sudden and violent changes in style; those dealing with a trade whose success or failure depends largely on farm conditions—both as to crops and prices, etc. The point is, that in certain kinds of business it is practically impossible to satisfactorily operate budgets along formal and generally recognized lines, and secure anticipated and desired results, both from results and financial standpoints as illustrated by the following cases:

Illustrative Cases

CASE 1. In the cotton oil industry, the operations of which are of a seasonal nature, it used to be the common practice of operators to go out and buy a supply of cotton seed at the going price, crush it, and then wait and speculate on the sale of the oil and other products in a subsequent season at prices which generally were sufficient to produce a satisfactory profit. In other words the operator did not need to pay much attention to costs and

* An address delivered at meeting of S. I. E., Chicago Chapter, February 10, 1927. From the Society of Industrial Engineers Bulletin.

budgets, but instead depended practically entirely on the seasonal advances in oil, which generally followed, to net a profit from operations. In fact this condition existed, to a large extent during the period of the World War, and although the government fixed the price of cotton seed oil, as it did also that of certain other basic commodities, nevertheless cotton seed oil prices showed a disproportionate increase from 1913 to 1919 of about 400 per cent, whereas general commodity prices increased only about 112 per cent during the same period. At the same time, and more or less as a result of this situation, there was a great increase in the number of operators, and considerable expansion in physical producing facilities. But, because of the high prices received for oil and other products, as compared with cotton seed costs; and in spite of the increase in the number of producing units, with a resultant decreased volume per mill; and, also in spite of increased expenses, it was possible, because of the wide spread between cost and selling prices to show a sufficient margin to produce very favorable results. In the post war period, however, prices of oil and other products decreased and did not show the usual seasonal advances; no longer was there a wide margin to cover heavy expenses, and fixed charges on unnecessarily large, physical and financial structures, and tremendous losses were suffered, and many mills discontinued operations. Today, although it is more common practice on the part of operators to determine their total costs; to attempt to budget operations; and to buy seed not only on a test basis, but also on the basis of prices justified by the current market for oil and other products, many difficulties are encountered in the formal application of a budget program, these difficulties being due to fluctuations in oil prices; variations in yields and grades of oil obtained from seed purchased in different sections of the South, and variations in the same sections from year to year; changes in the amount of cotton raised and therefore cotton seed supplied; fluctuations in the production, supply and prices of animal and other vegetable fats and oils, such as butterfat, lard, cocoanut oil, etc.

Case 2. Similar problems, with a somewhat different application are encountered in the commercial fertilizer industry, and in fact this industry is in more or less of a demoralized condition because of the factors affecting it.

To begin with, it is the practice of operators to sell fertilizer not only for cash, but also on a consignment time basis, shipments being made to consignees disposing of the product by supplying it to farmers and growers as needed. In addition, in many sections, particularly in the South, the farmer is supplied by the consignee or agent with cash, which usually has been borrowed from a local bank, and also supplies the grower with seed, merchandise, etc., to carry him through the planting, growing and part of the harvesting seasons, in return for which the farmer gives a crop lien interest bearing note or notes maturing during the harvesting and shipping season. In many sections the farmer's fixed property and chattels have already beer heavily mortgaged to banks and loan companies, and consequently the manufacturers and distributors who supply grocers, fertilizer, cash, etc., to finance operations, in actuality are supplying the working capital without security, and are gambling on two fundamental things, first that there will not be either a crop failure or over-production, and secondly, that a sufficient price will be obtained by the grower for his products to make it possible to repay the working capital supplied to him.

Now, then, the fertilizer manufacturer, as well as others, interested in a similar fashion, with this kind of a program confronting him, attempts to budget his sales, his purchases, production, costs and expenses, results and the probable effect on the financial structure of his business organization. Based on his estimates he begins operations, consigns more or less of his product to agents and distributors at a price which should net a profit or at least cover costs and some expenses, and then waits for the harvest. In other words, as a certain writer once said, "He plants by the light of the moon and reaps by the grace of God," and if there are crop failures due to droughts, floods, hurricanes, hailstorms, pests, and what not; or if there is abnormal over-production; and, or if therefore, the prices obtainable by the farmer are not sufficient to pay his bills, or at least the major part of them, then the manufacturer may conclude that the Good Lord wasn't with him, and in spite of his beautifully worked out budget program may suffer credit and collection losses that not only wipe out all anticipated profits, but also eat up some or a large part of the capital tied up in the goods shipped.

Many additional illustrations might be given, as most of you know, tending to show that even properly applied budgets will not entirely solve the problems involved in these cases. This does not mean, however, that budgets should not be used. On the contrary they should be applied whenever it is possible and practical to do so, but apparently their use will not solve all of our common everyday business problems.

The Use of Other Aids

The important point is that apparently the solution of the fundamental problems in some industries, and also individual organizations within these industries, necessitates the use of certain other aids in addition to budgets.

For example, if the business practices within a given industry are inherently wrong, the use of the budget in any one, or even several of these organizations will not bring about a solution. If the management of a company uses an excessive percentage of its profits and funds obtained from current borrowings for the purpose of expanding its fixed properties to meet actual or anticipated increasing demands of the trade when it is more or less generally conceded there is little justification for believing that this increased demand will be permanent; if, in spite of the use of budgets, products are frequently or regularly sold at prices that do not cover the total costs and financial requirements of doing business; or, if it prematurely and disproportionately increases its funded indebtedness, and financial structure, thereby creating unduly burdensome interest, sinking fund and other fixed and financial changes, using the funds provided for the purchase of fixed investments and properties when it is known that this action is not justified, this management is doing its company, together with the stockholders, creditors, and all other parties concerned an irreparable and inexcusable injury. And yet, these are illustrations of gross business mis-management from a broad policy standpoint which are altogether too prevalent in this day and age, and are indicative of some of the major reasons why a great many concerns are not successful, and why reorganizations, refinancings, and actual liquidations are so common in American business and industry.

The point is that unless moral and mental fiber of your executives is sound, and unless the financial structure of your organization is fairly well in line with an average for your particular industry, and for business as a whole, no budget plan ever devised will solve your problems.

In other words, in addition to the need for proper mental balance on the part of your executives, and a fairly satisfactory business and financial organization to begin with, there is not only need for the use of a budget, but also a need to make frequent regular, and careful analyses of your organization, comparing it with immediate competitors and the industry and business conditions as a whole. Surveys should be made of the general economic and business factors surrounding the industry, and an analysis and comparison should be made of the reports of your company and competitors. Unless your company can meet required standards, or at least match up with the average improved standards set up by competition in your industry, it cannot long survive. And, as already explained, apparently about the only way you can find out if it is doing this is to make a survey of the competitive and economic conditions in your industry, to compare your financial, operating and merchandising standards, ratios and measures with those of competitors; and, then try to get your executives to give this information serious consideration.

Some Common Standards, Ratios and Measures

Some of the more common standards, ratios and measures which may be used in comparing your organization with that of competitors are as follows:

FINANCIAL STANDARDS

Turnover of accounts receivable.
Turnover of inventories.
Relationship of fixed property investment to volume of business, weight and value.
Turnover of total capital employed.
Ratio of working capital.
Sources from which capital is secured.
The uses of this capital.
Proportion of earnings left in the business.

MEASURE OF EARNINGS

Relation of surplus net profit to net worth.
Relation of surplus net profits to volume of business from both weight and value standpoints.
Earnings on common stockholders' investments.
Relation of operating profits to total capital used.
Relation of operating profits to volume of business from both weight and value standards.

MEASURE OF COSTS AND EXPENSES

Relation of costs and expenses to volume of business, weight and value.
Relation of property expenses to costs and sales.
Cost of borrowed capital; and total financial expenses of burden.
Cost of total capital employed.
The spread between costs and sales.
Unit costs and expenses of all kinds.

These are standards or measures that will indicate what your company is doing, and what it should do as compared with competitors, and disclose information that cannot be determined from the use of a budget.

Now, certain of the standards and ratios referred to above may be explained more in detail, as follows:

Financial Standards

Is the money tied up in your accounts and notes receivable working as rapidly as it should? The longer an account stands out the greater is the chance for loss. In the meantime the money tied up is costing you interest, and is not producing a profit. What percentage of the receivables are uncollectible? Have proper bad and doubtful account provisions been made? When do the notes receivable mature, and what possibility is there of collecting them when additional ready cash will be needed?

What is the turnover of inventories, that is, how many times does the money tied up in inventories produce a profit? Are your inventories properly priced or do they contain unearned and fictitious paper profits? Real profits result only from economical and satisfactory manufacturing and merchandising activities. Are excessive stocks of raw materials, supplies and finished goods carried? Are certain units obsolete? Have you segregated consignment stocks from others in your reports? What is the true collateral value of your total inventory for loan purposes?

What volume of business are you and your competitors doing on the average per each dollar tied up in fixed properties? Are certain properties inactive and what can you do to put them to work? Are the valuations carried at a conservative figure, or have you permitted them to be overstated through optimistic appraisals? Have you capitalized items that should have been charged against results? Have you failed to make proper repairs, and consistent write-offs for depreciation?

Measures of Earnings

What are your surplus net results on net worth, capital stock, and total assets used as compared with competitors? Is the spread between your buying and selling prices sufficient to cover total costs and expenses, including the financial burden and requirements, such as interest, depreciation and obsolescence, reserves for various contingencies, write-offs of financing, refinancing and reorganization expenses, and provisions for federal taxes and dividends? Or, are your results erroneously overstated due to your having disregarded certain items of expense and financial burden, and to your having bought at prices which were too high and sold at prices which were too low?

Do you, or the managers of your various departments, or the executives directly responsible for results on your various products or lines of business know in advance from period to period what portion each department or line of business must bear of your total cost of doing business? Or, do you fail to delegate part of this responsibility and trust that at the end of the season or year's business there will be sufficient profits to cover all expenses and meet dividend requirements?

Measures of Costs and Expense

What is the ratio of your cost of goods manufactured and sold to net sales? Are you including all items of cost that should be included, or are you figuring a considerable portion of your costs on a "money-out-of-pocket cost" basis, thus permitting your sales departments to sell the products at prices which are too low? Irrespective of your method of cost finding, do you ever prepare statistics of your unit costs in a way that will compare "money-out-of pocket cost," factory cost, cost to make and sell, and total cost to do business? Do you do this from period to period and from year to year, so you can definitely locate the causes for increasing or decreasing costs, and can definitely determine the responsibilities of your manufacturing, merchandising, or general management for prevailing conditions, and your position as compared with competitors?

Illustrative Cases

The following illustrations, based on cases which actually occurred, serve to show how certain concerns failed to heed some or all of the management standards outlined above, and consequently have had financial difficulties of a more or less serious nature:

CASE 1. To begin with this company was over capitalized, considering the volume of business to be done. Part of the over capitalization was brought about by setting up charges to intangible asset accounts and crediting earned surplus for a sum practically equal to all assets previously carried on the books, and practically the total of this amount was distributed as a common stock dividend, thereby doubling the total dividend requirements. In addition the interest and sinking fund requirements on funded debt were excessively large. Due principally to poor business management in the past, the ratio of working capital had dwindled to about one dollar and five cents of current assets to each dollar of current liabilities. This ratio was temporarily improved somewhat, being raised to about 1:75, by using the proceeds of a preferred stock issue to reduce current bank loans and amounts owed to trade creditors, in the meantime increasing the dividend requirements. It was found that although the average inventory turnover in that industry was from three to four times a year, this company was turning its inventories on the average only about one and a half times a year, and its turnover of accounts receivable was less than half the average for the industry as a whole.

An analysis of sales and costs of sales showed that over sixty per cent of the products produced and sold failed to show a spread between cost and sales prices of more than one cent per pound on the average, whereas the plant cost alone was over two cents a pound and the total cost of doing business was over three cents a pound. On the remaining forty per cent of the business the spread was only enough to cover slightly more than plant cost. Most of the products were sold in the competitive market at prices slightly under those of certain competitors, and considerably below those of others. The plant was only operating at about sixty or seventy per cent of capacity, and yet inventories were increasing

because the purchasing and production programs had not been kept in tune with the sales program.

The company had practically no system of cost accounting, and no way of accurately determining unit costs and results. Its financial and general accounting was entirely inadequate. Because of its inadequate system of cost accounting, finished goods and work in process inventories were priced on a more or less arbitrary and estimated basis, and a fictitious book profit was commonly taken up in the final results.

This company is in a serious financial condition at the present time and to all outward appearances will have to reorganize and change its methods, or actually liquidate in the near future.

CASE 2. This company, a several million dollar corporation, has failed for the past six years to make sufficient profits to pay preferred or common stock dividends. The principal reason for this condition is that it has sold its products at lower prices than competitors—or than it could afford to sell them—evidently for the purpose of increasing its volume. Although volume has increased slightly, the increase has not effected sufficient decrease in unit costs and expenses to offset or more than offset the narrowed margin resulting from low sales prices. However, in spite of the fact that it has not earned its dividends, it has paid preferred dividends regularly out of surplus previously accumulated.

Prior to 1920 the working capital position of the company was weak, the ratio of current assets to current liabilities averaging about 1.5, which was not only extremely low for that type of business, or most kinds of business, but was much lower than that of competing concerns. During 1921 a heavy, first mortgage bond issue, carrying burdensome interest and sinking fund requirements, was floated to relieve the short term note situation and to otherwise improve the working capital position. These added expenses together with the fact that earnings were already insufficient to meet preferred dividend requirements, coupled with a surplus which was practically depleted, merely intensified the seriousness of the financial position of the corporation.

Many more illustrations, such as those enumerated above, might be outlined to illustrate the short-sightedness of some business and industrial officials and executives. However, the point is, that the officials and managing executives of your company, or any company, generally can avoid such situations by the use of budgets, and by considering the prevailing financial, operating and merchandising standards and ratios applicable to your field of business.

In other words, we must all admit that business and competitive conditions are constantly changing. Just because your business has been meeting or exceeding competitive standards in the past, is no sign it is doing so now. The only way you can accurately determine its status is to analyze it and the only way you can find out whether or not you are maintaining or improving your financial, cost and merchandising standards is to constantly analyze your business in its entirety, as compared with competitors.

But most important of all, you should impress upon your management the vital necessity of counselling with its accountants and securing advanced accounting and budget information before entering into and consummating any of its dealings, however small they may be.

Conclusion

In conclusion, it is evident that the business and industrial establishments which will survive and will earn reasonable profits in the future are those which most satisfactorily meet economic conditions; that are not weighted down with an unwieldy and burdensome financial structure; and, that readily meet changing business and competitive conditions in operations.

It is economically unsound for industries to attempt to stabilize prices, costs and profits through legislation, and monopolistic control, attempting thereby to sustain life by unwarranted artificial measures. Free prices is the mechanism that is required to maintain industrial balance. If your company, or any company cannot meet this fundamental economic law, it cannot long survive. But, if each one of us will recognize that this law is constantly at work, and that it is imperative for us to analyze and budget our business organisms so they will meet its requirements, much will have been accomplished, not only to prevent our organizations from becoming subjects of industrial post mortems, but to increase their earning power and to make them sufficiently strong financially, to meet the problems of the future.

Canadian Paper Exports Increase

According to the report issued by the Canadian Pulp and Paper Association, the exports of pulp and paper in March were valued at $17,234,858, an increase of $4,257,893 over the previous month but slightly below the total for March, 1926.

Exports of wood-pulp in March were valued at $4,407,371 and exports of paper at $12,827,487 compared with $3,239,761 and $9,737,204 respectively in the month of February.

For the various grades of pulp and paper details are as follows:

	March, 1927		March, 1926	
	Tons	$	Tons	$
PULP:				
Mechanical	19,688	562,056	27,095	767,752
Sulphite Bleached	23,305	1,902,369	21,170	1,670,195
Sulphite Unbleached	16,180	879,442	27,054	1,595,714
Sulphate	17,388	1,063,504	17,809	1,098,008
	76,561	4,407,371	93,128	5,131,669
PAPER:				
News Print	184,502	12,104,884	173,171	11,460,211
Wrapping	1,959	221,597	2,899	383,525
Book (cwts.)	6,280	51,362	5,406	48,189
Writing (cwts.)	2,022	16,239	2,736	22,964
All Other	.....	433,405	.....	506,621
		12,827,487		12,421,510

For the first three months of the year the total exports of pulp and paper were valued at $43,660,840 as compared with a total of $44,042,002 in the corresponding three months of 1926, a decline for this year of $381,162.

The decline was due to a decrease in the shipments of wood-pulp the value of which amounted to $11,312,187 in the first quarter of the current year as compared with $13,501,570 in the corresponding period of 1926. Exports of paper on the other hand increased appreciably, the total value for the first quarter of 1927 being $32,348,653 as compared with a total of $30,540,432 in the first quarter of 1926.

Details for the various grades are as follows:

	3 months, 1927		3 months, 1926	
	Tons	$	Tons	$
PULP:				
Mechanical	45,803	1,296,911	84,716	2,465,680
Sulphite Bleached	61,972	4,860,890	52,057	4,120,641
Sulphite Unbleached	48,327	2,661,477	74,579	4,228,493
Sulphate	40,798	2,492,909	43,358	2,686,756
	196,900	11,312,187	254,710	13,501,570
PAPER:				
News Print	468,030	30,677,339	428,135	28,315,776
Wrapping	4,708	534,419	5,954	789,208
Book (cwts.)	12,288	107,879	9,368	87,118
Writing (cwts.)	3,846	30,824	4,040	32,077
All Other	.....	998,192	.....	1,316,253
		32,348,653		30,540,432

Pulpwood exports for the first quarter amounted to 507,106 cords valued at $4,665,311. This is an increase over the shipments for the first quarter of 1926 when the total exports were 362,359 cords valued at $3,331,998.

Transfer Technical Dept. to Cincinnati

CINCINNATI, Ohio, May 9, 1927.—The Technical Service Department operated by General Naval Stores Company, Inc., under the direction of E. V. Romaine is now being transferred from 187 Greenfield avenue, Milwaukee, Wis., to the more central location at North Side Bank Building, Cincinnati, Ohio.

This move affords Mr. Romaine the opportunity of keeping in closer touch with consumers of wood rosin who require his expert services.

Wrapping Paper Makers To Convene

An important meeting of water-proof and moisture-proof wrapping paper manufacturers is to be held in Boston, Mass., on Tuesday, May 24.

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Rosin is an expensive raw material. The more you keep in the paper sheet, the more waterproof it is. Quartz Quality Silicate increases the retention of rosin, and more than pays its way in this respect alone. "S" Brand or "A-Syrup" Silicate is the right grade for use with rosin.

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CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

DENNISONCRAFT, No. 243,201. Dennison Manufacturing Company, Framingham, Mass. For crepe paper outfit consisting of material for making crepe-paper flowers and decorations.

LINCOLN HONESTY KRAFT, with picture of Lincoln, No. 244,290. Coy, Disbrow & Co., Inc., New York City. For kraft paper in rolls and sheets.

SERVALL, No. 245,088. Hyman Fishman, New York City. For wrapping paper, wax paper, and toilet paper.

NORMOGRAPH, No. 243,485. Filler & Fiebig, Berlin, Germany. For drawing paper, tracing paper, tracing paper for blue and black tracing, stencils, writing stencils, holders for writing stencils, handles for stencils, pens for writing with writing stencils, fountain pens, penholders, and writing pads.

WANT PAPER APPRAISER

(*Continued from page 30*)

Abitibi Power and Paper Company at Iroquois Falls, Ont. He succeeds T. A. McDonald who, previous to his departure, was tendered a dinner and made the recipient of several gifts. Mr. McDonald was one of the pioneer employees of the Abitibi company at Iroquois Falls.

The Howard Smith Paper Mills, Ltd., Montreal, are sending out each month a handsome lithographed calendar on one of their standard lines of paper, showing the different qualities used for various purposes. During the remainder of 1927, the sixtieth anniversary of Confederation, the calendar will present each month a striking picture of Canadian scenery of historic interest.

Colonel Mills, who has been purchasing agent for some time for the Abitibi Fibre Company, which recently removed its office in Toronto to Smooth Rock Falls, Ont., has resigned his position.

It is understood that construction on the new news print mill of the Great Lakes Paper Company, which will be located on Neebing avenue, Fort William, Ont., will begin about June 1 and that engineers will be on the ground by that time to lay out the site.

R. S. Kellogg Speaks at Ithaca

[FROM OUR REGULAR CORRESPONDENT]

ITHACA, N. Y., May 18, 1927.—"In 1925, slightly less than three hundred years after the setting up of the first printing press in the United States, the value of printing products in this country exceeded two billion dollars," said R. S. Kellogg, Secretary of the News Print Service Bureau, New York, in speaking to the Rotary Club here today. "Five hundred thousand books and pamphlets are now published in the United States annually. In 1827 the Hartford *Times* could print 175 4-page papers hourly; in 1927 the same paper could run off 64,000 56-page papers in that length of time. The presses of the Philadelphia *Bulletin* take 2,000 miles of 72-inch sheet hourly and print 28,000,000 pages weekly. In 1926 there were 22,000 newspapers in the country, 2,000 of them English-language dailies. During the year more than thirteen billion copies of daily and Sunday papers were printed. It is no novelty nowadays for a paper to go beyond fifty pages daily and two hundred pages on Sunday.

"In 1860 the consumption of news print in the United States was 4 pounds per capita. In 1926, only sixty-six years later, it had jumped to 58 pounds. The combined North American production of news print in 1926 was 3,768,000 tons. The United States alone consumed 3,400,000 tons of news print last year, or 56 per cent of the world consumption, using all but 19,000 tons of its own production, plus 88 per cent of Canada's production, half of that in Newfoundland and 100,000 tons from overseas.

"The wood used in making this paper would make a woodpile one mile square and 23 feet high. Such an amount of paper would cover 14,600,000 acres, or 46 per cent of the State of New York. It would belt the earth at the Equator 4,700 feet wide and fill a freight train 1,000 miles long."

Canadian Technical Section to Meet

The summer meeting of the Canadian Pulp and Paper Association will be held June 20-24.

Edward Beck, Technical Section Secretary, states that "The executive committee, after considering several alternative programs decided that a trip embracing visits to the new paper mills in the Lake St. John District in Quebec offered the greatest attraction to the members, combining, as it does, educational and recreational opportunities not commonly available. The companies, whose mills will be visited have extended a most cordial invitation to the Section and a program of unusual interest will be presented. Since it is necessary to ascertain as early as possible what number to provide for, members are urged to advise the secretary so that the required resrvations may be made."

Arrangements for the meeting are as follows: Members assemble at Quebec, Monday, June 20th, making their own arrangements to that point.

Monday, June 20: Leave for Saguenay Power Junction, C. N. R., 10:30 p.m. (East. Standard Time).

Tuesday, June 21: Arrive Saguenay Power Jct. 7:10 a.m.

Tuesday, June 21, and Wednesday, June 22: Inspection of mills at Kenogami, Riverbend, Grande Decharge, etc.

Thursday, June 23: At Port Alfred.

Friday, June 24: Leave Chicoutimi 7 a.m. by S.S. Cape Diamond for Quebec, thus making the Saguenay trip by daylight and arriving in Quebec at 10 p.m. in time to connect with trains to Montreal.

The sleeping car will be held to provide accommodation each night.

Total cost from Quebec and return to Quebec will be about $40.00.

Gigantic Power Project on Potomac

[FROM OUR REGULAR CORRESPONDENT]

CLEVELAND, Ohio, May 16, 1927.—Plans for a gigantic power project on the Potomac river near Washington intended to supply paper mills, other industries and municipalities with power is announced by Cleveland men who head the project.

Robert J. Bulkley, attorney, is president and James R. Gloyd, Cleveland contractor, is vice president of the Potomac River Corporation which will carry out the project and for whom surveys along the Potomac have been in progress for eighteen months. The project will consist of two dams each 100 feet high to be built within 15 miles of Washington and which will back up the river for 40 miles. The total cost is estimated at $60,000,000 to $65,000,000. It is expected to develop 350,000 horsepower.

H. M. Byllesby & Co., Chicago financial house with large interests in hydro-electric development, will have a half interest in the enterprise and the Cleveland group the other half. In addition to Messrs. Bulkley and Gloyd, directors of the company are James G. Bachman of the law firm of Bulkley, Hauxhurst, Jamison and Sharp; F. W. Ballard of F. E. Ballard & Co., engineers, and Joseph C. Hostetler of the law firm of (Newton D.) Baker, Hostetler & Sidlo, all of Cleveland. Mr. Baker is understood to be one of the stockholders.

The Potomac company proposes to sell its power to plants in Washington, Baltimore, Harrisburg, Pa., and in Maryland, West Virginia and Virginia. Power will not be available for about five years, it is believed.

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Cia de las Fabricas de Papel de San Rafael y Anexas, Mexico City

The largest mill in Mexico

The Fuji Paper Co., Tokyo, Japan

One of the largest mills in Japan

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Yet they cost no more to buy.

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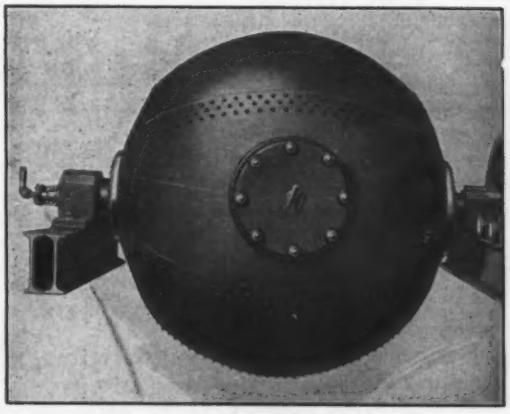
JUST let us take you through the Biggs shops once—that trip alone will sell you on Biggs Rotary Bleaching Boilers and Engines.

Paper mill executives have been greatly impressed by the extreme care given each piece of work going through our plant. They marvel at the accurate fabrication, rugged riveting and exacting tests applied.

Biggs Globe and Cylinder Rotaries are built RIGHT, there's no question about that. Come and see for yourself.



PATENTS PENDING

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Chicago Office: 35 So. Dearborn St.

Eastern Office: 300 Madison Avenue, New York City

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Trade Mark Registered

GLOBE and CYLINDER

ROTARY BLEACHING BOILERS

for Years of Dependable Cooking and Bleaching

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MAY 14, 1927

SUMMARY

Cigarette paper .....3,768 cs.
Wall paper .....450 bls., 22 cs.
Paper hangings .....41 bls., 20 cs.
News print .....6,855 rolls
Printing paper .....20 rolls, 18 cs.
Wrapping paper.....402 bls., 398 rolls, 61 cs.
Packing paper.....84 rolls, 5 bls., 31 cs.
Writing paper .....87 cs.
Colored paper .....24 cs.
Tissue paper .....70 cs.
Pergamyn paper .....29 cs.
Surface coated paper .....69 cs.
Gold coated paper.....7 cs.
Filter paper .....18 cs.
Drawing paper .....43 cs.
Cover paper .....1 ble., 13 cs.
Miscellaneous paper .....376 rolls, 25 cs.

CIGARETTE PAPER

British American Tobacco Co., Adriatic, Liverpool, 5 cs.
Liggett & Myers Tobacco Co., Paris, Havre, 69 cs.
Standard Products Corp., Vincent, Havre, 50 cs.
R. J. Reynolds Tobacco Co., Collamer, St. Nazaire, 1,580 cs.
American Tobacco Co., Collamer, Bordeaux, 1,470 cs.
De Manduit Paper Corp., Collamer, St. Nazaire, 594 cs.

WALL PAPER

A. C. Dodman, Jr., Inc., Aquitania, Southampton, 4 bls.
Keller Dorian Paper Co., Aquitania, Southampton, 15 cs.
F. & R. Trading Corp., Arabic, Antwerp, 432 bls.
W. H. S. Lloyd & Co., Scythia, Liverpool, 5 bls.
R. F. Downing & Co., Minnesota, London, 3 bls., 3 cs.
Bendix Paper Co., Westphalia, Hamburg, 4 cs.
A. C. Dodman, Jr., Inc., Majestic, Southampton, 6 bls.

PAPER HANGINGS

Whiting & Patterson Co., Inc., Aquitania, Southampton, 4 cs.
Whiting & Patterson Co., Inc., Minnesota, London, 8 cs.
W. H. S. Lloyd & Co., Minnesota, London, 39 bls., 8 cs.
A. C. Dodman, Jr., Inc., Scythia, Liverpool, 2 bls.

NEWS PRINT

Perkins, Goodwin & Co., Westphalia, Hamburg, 466 rolls.
Brooklyn News, Humberarm, Corner Brook, 630 rolls.
Brooklyn Times, Humberarm, Corner Brook, 116 rolls.
N. Y. Times, Humbararm, Corner Brook, 278 rolls.
N. Y. Telegram, Humbararm, Corner Brook, 3,735 rolls.
Washington News, Humberarm, Corner Brook, 138 rolls.
Washington Star, Humberarm, Corner Brook, 80 rolls.
N. Y. Post, Humberarm, Corner Brook, 174 rolls.
Bank of Montreal, Humberarm, Corner Brook, 1,238 rolls.

PRINTING PAPER

Oxford University Press, Adriatic, Liverpool, 5 cs.
Keuffel & Esser, Westphalia, Hamburg, 20 rolls.
Martin & Bechtold, Jufuku Maru, Hamburg, 13 cs.

WRAPPING PAPER

British American Tobacco Co., Clara, Trieste, 127 bls.
Birn & Wachenheim, Arabic, Antwerp, 12 cs.
Goldsmith & Co., Gripsholm, Gothenburg, 195 bls.
C. K. MacAlpine & Co., Gripsholm, Gothenburg, 35 cs., 80 bls., 398 rolls.
Bendix Paper Co., Westphalia, Hamburg, 10 cs.
Birn & Wachenheim, Majestic, Southampton, 4 cs.

PACKING PAPER

Quality Art Novelty Co., Westphalia, Hamburg, 31 cs.
J. P. Heffernan Paper Co., Westphalia, Hamburg, 5 bls.
R. Wilson Paper Corp., Sac City, Antwerp, 84 rolls.

WRITING PAPER

Coenca, Morrison Co., Aquitania, Southampton, 5 cs.
F. L. Kramer & Co., Minnetonka, London, 6 cs.
American Express Co., Majestic, Southampton, 9 cs.
G. D. Kuper, Providence, Marseilles, 36 cs.
Japan Paper Co., Paris, Havre, 26 cs.
Guibout freres, Paris, Havre, 5 cs.

COLORED PAPER

Kofler & Co., Arabic, Antwerp, 6 cs.
Borden Riley Paper Co., Arabic, Antwerp, 11 cs.
C. W. Williams Co., Arabic, Antwerp, 7 cs.

TISSUE PAPER

F. B. Vandegrift & Co., Scythia, Liverpool, 34 cs.
Meadows, Wye & Co., Scythia, Liverpool, 3 cs.
Old Master Paper & Pulp Corp., Westphalia, Hamburg, 33 cs.

PERGAMYN PAPER

F. C. Strype, Westphalia, Hamburg, 29 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Arabic, Antwerp, 38 cs.
Gevaert Co. of America, Arabic, Antwerp, 19 cs.
Whiting & Patterson Co., Inc., Westphalia, Hamburg, 12 cs.

GOLD COATED PAPER

F. Murray Hill, Geo. Washington, Bremen, 7 cs.

COATED PAPER

G. W. Sheldon & Co., Minnesota, London, 1 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnesota, London, 13 cs.
A. Giese & Son, Westphalia, Hamburg, 5 cs.

DRAWING PAPER

Favor, Ruhl & Co., Minnesota, London, 2 cs.
Keuffel & Esser, Westphalia, Hamburg, 41 cs.

COVER PAPER

Lorscheider Schang Co., Inc., Westphalia, Hamburg, 7 cs.
International Forwarding Co., Westphalia, Hamburg, 6 cs., 1 ble.

MISCELLANEOUS PAPER

Arkell Safety Bag Co., Gripsholm, Gothenburg, 376 rolls.
E. H. Sergent & Co., Gripsholm, Gothenburg, 5 cs.
P. H. Petry & Co., Westphalia, Hamburg, 3 cs.
Freedman & Slater, Westphalia, Hamburg, 3 cs.
Hensel, Bruckman & Lorbacher, Paris, Havre, 8 cs.
Japan Paper Co., Paris, Havre, 6 cs.

RAGS, BAGGINGS, ETC.

Equitable Trust Co., M. Arnus, Barcelona, 169 bls. rags.
I. Cohen & Son, Clara, Trieste, 26 bls. rags.
Chemical National Bank, Tigre, Hamburg, 4 bls. rags.
Bulkley, Dunton & Co., Tigre, ——, 43 bls. rags.
E. J. Keller Co., Inc., Tigre, Antwerp, 67 bls. rags.
E. J. Keller Co., Inc., Tigre, Antwerp, 793 bls. flax waste.
E. J. Keller Co., Inc., Tigre, Antwerp, 191 bls. linen threads.
E. Butterworth & Co., Inc., Tigre, Antwerp, 120 bls. bagging.
Atlas Waste Manfg. Co., Porto Rico, San Juan, 33 bls. rags.
Darmstadt, Scott & Courtney, Jufuku Maru, Hamburg, 38 bls. rags.
Bulkley, Dunton & Co., Jufuku Maru, ——, 112 bls. rags, 17 bls. thread waste.
Castle & Overton, Inc., Jufuku Maru, Hamburg, 269 bls. bagging.
Brown Bros. & Co., M. Ossero, Alexandria, 325 bls. rags.
American Exchange Irving Trust Co., M. Ossero, Alexandria, 72 bls. rags.
Brown Bros. & Co., Boston City, Bristol, 72 bls. rags.
E. J. Keller Co., Inc., Westphalia, Hamburg, 47 bls. new cuttings.
Castle & Overton, Inc., Alicante, Spain, 98 bls. rags.
E. J. Keller Co., Inc., Sac City, Antwerp, 168 bls. flax waste.
Salomon Bros. & Co., Sac City, Antwerp, 109 bls. flax waste.
V. Galaup, Vincent, Dunkirk, 24 bls. rags.
Goldman, Sachs & Co., Collamer, St. Nazaire, 92 bls. rags.
E. J. Keller Co., Inc., Collamer, St. Nazaire, 180 bls. rags.
Bulkley, Dunton & Co., France Maru, ——, 68 bls. rags.
Bulkley, Dunton & Co., Schodack, ——, 59 bls. rags.

OLD ROPE

N. E. Berzen, Westphalia, Hamburg, 361 coils.

MANILA ROPE

Burrshel Co., Adriatic, Liverpool, 25 pkgs.
American Express Co., Scythia, Liverpool, 10 coils.
Ellermans' Wilson Line, Minnesota, London, 61 coils.

HEMP YARN

F. L. Kramer & Co., Westphalia, Hamburg, 1 bls.

WOOD PULP

Buck, Kiaer & Co., Inc., Norefjord, Oslo, 2,500 bls. sulphite.
J. Anderson & Co., Norefjord, Sarpsborg, 1,900 bls. sulphite.
M. Gottesman & Co., Inc., Clara, Trieste, 2,982 bls. wood pulp, 373 tons.
Equitable Trust Co., Tigre, Hamburg, 343 bls. wood pulp.
E. J. Keller Co., Inc., Muenchen, Bremen, 700 bls. wood pulp.

WOOD FLOUR

B. L. Soberski, Norefjord, Fredrikstad, 1,575 bags.

CASEIN

M. H. Grace, Pan America, Buenos Aires, 423 bags.
Kalbfleisch Corp., Pan America, Buenos Aires, 2,459 bags.
Atterbury Bros., Inc., Castilian Prince, Buenos Aires, 1,668 bags, 220,638 lbs.
M. H. Grace, Castilian Prince, Buenos Aires, 846 bags, 111,884 lbs.
T. M. Duche & Sons, Castilian Prince, Buenos Aires, 2,919 bags, 175,140 kilos.

CHINA CLAY

C. B. Richard & Co., Boston City, Bristol, 90 casks.
L. A. Salomon & Bros., Boston City, Bristol, 165 bags.

BOSTON IMPORTS

WEEK ENDING MAY 14, 1927

Brown Bros. & Co., Scythia, Liverpool, 20 bls. rags.
G. F. Malcolm, Scythia, Liverpool, 15 cs. tissue paper.
J. T. Lodge, Scythia, Liverpool, 12 bls. rags.
1st National Bank of Boston, Castilian Prince, Buenos Aires, 500 bags casein, 30,000 kilos.
T. M. Duche & Sons, Castilian Prince, Buenos Aires, 834 bags casein, 50,040 kilos.
1st National Bank of Boston, Harmonides, B. Aires, 584 bags casein, 35,040 kilos.
Buck, Kiaer & Co., Inc., Ivar, Oslo, 1,600 bls. sulphite pulp.
Buck, Kiaer & Co., Aspen, Stockholm, 1,200 bls. sulphite pulp.
Bulkley, Dunton & Co., Boschdyk, ——, 137 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING MAY 14, 1927

Castle & Overton, Inc., Syros, France, 306 bls. rags.
Castle & Overton, Inc., Syros, Belgium, 129 bls. bagging.

CHARLESTON IMPORTS

WEEK ENDING MAY 14, 1927

Castle & Overton, Inc., Liberty Glo, Germany, 95 bls. bagging.
E. J. Keller Co., Inc., Ohioan, Kobe, 300 bls. gunnys.

PHILADELPHIA IMPORTS

WEEK ENDING MAY 14, 1927

J. A. Steer & Co., Boston City, Bristol, 53 coils old rope.
Paper Service Co., London Mariner, London, 1 cs. paper.

(Continued on page 68)

ANNOUNCEMENT

PAPER MACHINERY, LTD.,
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General Offices and Factory: NIAGARA FALLS, N. Y.

Direct Sales Offices: 424 West 33rd Street New York City — 116 West Harrison Street Chicago

Imports of Paper and Paper Stock

(Continued from page 66)

Robert Blank, London Mariner, London, 98 bls. rags.

Katzenstein & Keene, Inc., London Mariner, London, 367 bls. rags.

A. H. Searle & Co., Inc., London Mariner, London, 329 bls. rags.

E. J. Keller Co., Inc., Sacandaga, Antwerp, 119 bls. rags.

E. J. Keller Co., Inc., Sac City, Antwerp, 136 bls. rags.

Castle & Overton, Inc., Sac City, Antwerp, 100 bls. rags.

M. Friedman, Sac City, Antwerp, 100 bls. rags.

Chemical National Bank, Sac City, Antwerp, 45 bls. rags.

D. I. Murphy, Sac City, Antwerp, 235 bls. rags.

Equitable Trust Co., Sac City, Antwerp, 65 bls. rags.

J. Walworth, Sac City, Antwerp, 26 bls. rags.

E. J. Keller Co., Inc., Sac City, Antwerp, 87 coils old rope.

MacBlaine & Co., Sac City, Antwerp, 23 bls. rags.

Congoleum Nairn Co., Clontarf, Leghorn, 183 bls. rags.

National City Bank, Clontarf, Palermo, 188 bls. rags.

Castle & Overton, Inc., Hannover, Germany, 4,730 bls. wood pulp.

Castle & Overton, Inc., Hannover, Germany, 77 bls. rags.

Castle & Overton, Inc., West Harcuvar, Germany, 120 bls. rags.

Castle & Overton, Inc., Vincent, Dunkirk, 307 bls. rags.

E. Butterworth & Co., Inc., Vincent, Dunkirk, 137 bls. rags.

E. J. Keller Co., Inc., Vincent, Dunkirk, 33 bls. rags.

A. Hurst & Co., Vincent, Dunkirk, 78 bls. rags.

J. M. Hagy Waste Works, Vincent, Dunkirk, 280 bls. rags.

Salomon Bros. & Co., Vincent, Havre, 39 bls. rags.

M. Freidman, Vincent, Havre, 57 bls. rags.

A. Hurst & Co., Vincent, Havre, 59 bls. rags.

V. Galaup, Vincent, Havre, 174 bls. rags.

A. Hurst & Co., Collamer, St. Nazaire, 59 bls. rags.

A. Hurst & Co., Collamer, Bordeaux, 74 bls. rags.

Baltimore Trust Co., Collamer, Bordeaux, 40 bls. rags.

Congoleum Nairn Co., Collamer, Bordeaux, 895 bls. rags.

Castle & Overton, Inc., Collamer, Bordeaux, 287 bls. rags, 10 bls. rope.

Bulkley, Dunton & Co., Blydendyk, ——, 93 bls. rags.

Bulkley, Dunton & Co., W. Campion, ——, 76 bls. rags.

Bulkley, Dunton & Co., Wythevilie, ——, 252 bls. rags.

Buck, Kiaer & Co., Inc., Ivar, Oslo, 400 bls. sulphite.

NORFOLK IMPORTS

WEEK ENDING MAY 14, 1927

Portsmouth Star, Humberarm, Corner Brook, 154 rolls news print.

Knoxville News, Humberarm, Corner Brook, 263 rolls news print.

Norfolk Times, Humberarm, Corner Brook, 423 rolls news print.

Norfolk Post, Humberarm, Corner Brook, 953 rolls news print.

Norfolk Despatch, Humberarm, Corner Brook, 212 rolls news print.

Norfolk Leader, Humberarm, Corner Brook, 1,167 rolls news print.

Knoxville Journal, Humberarm, Corner Brook, 43 rolls news print.

Bank of Montreal, Humberarm, Corner Brook, 1,126 rolls news print.

BALTIMORE IMPORTS

WEEK ENDING MAY 14, 1927

Robert Blank, Liberty Land, Naples, 145 bls. rags.

Castle & Overton, Inc., Hannover, Germany, 2,935 bls. wood pulp.

Castle & Overton, Inc., C. Legien, Germany, 334 bls. cellulose.

Buck, Kiaer & Co., Inc., Ivar, Oslo, 1,600 bls. sulphite pulp.

Buck, Kiaer & Co., Inc., Saga, Sundsvall, 1,500 bls. sulphite pulp.

Survey As Aid to Permanent Flood Control

That "Congress in providing for a plan looking to the permanent control of the Mississippi river should arrange for a survey of the lands on the watersheds of the river and its tributaries which are adapted to reforestation," is the opinion expressed here today by George D. Pratt, President of The American Forestry Association.

"There are millions of acres throughout the twenty states which form the drainage area of the Mississippi river," declared Mr. Pratt, "that have been deforested during the past fifty years and which can and should serve the nation in the dual capacity of producing timber and improving the run-off conditions of the hundreds of streams and rivers that empty their flood waters into the Mississippi."

Mr. Pratt declares that these lands are chiefly valuable for watershed protection and for timber production and that unless they are reforested and properly protected from fire, they will continue to lie idle and to aggravate the flood problem of the Mississippi river.

"The influence of forests upon run-off is so well established that it is incumbent upon Congress to examine exhaustively into the possibilities of reforestation as one method of regulating the flood stages of the Mississippi and its tributaries. Water companies have found that the best way of regulating their water is by forestation and the state and national responsibilities in averting a repetition of the present Mississippi catastrophe are too great to permit reforestation to be ignored or discarded because engineers do not believe that deforestation has been a primary cause of the catastrophe.

"No well-informed person will pretend that the Mississippi river can be controlled by reforestation alone but it is one of many measures of possible relief which must be developed to its maximum of possibilities. The extent of these possibilities is not now known and cannot be known until a systematic survey is made of the lands in the several states involved which are suitable for and in need of reforestation."

Mr. Pratt believes that such a survey will not only serve to delimit these lands but will show their present conditions as to forest cover and their potential value, when reforested, in regulating the flow of the streams and rivers which empty into the Mississippi. He insisted that only by a systematic survey of this kind can Congress possess itself of the facts needed in developing a permanent and effective plan of mastering the Mississippi during its flood moods.

"It has required many years and millions of dollars to build the levees on the Mississippi," he said. "The process of replacing them now will be equally expensive. While I do not believe reforestation is a panacea for these flood evils, I believe it will help very materially in lesening the onrush of the waters and is decidedly worth the money the government will need to put into it."

Foreign Visitors at American Writing

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., May 17, 1927.—Guests of the American Writing Paper Company the past week included Alfredo Paris, chief of the commercial section, purchasing department, of the Republic of Colombia, and Eduardo Gamboa, proprietor of the firm of Papearia Samper Matiz, the largest paper jobbing and wholesale stationery firm in Bogota, Colombia. These men have recently placed a contract for paper with the American Writing Paper Company. It was Mr. Paris' first visit to this country.

Mr. Paris is in charge of the selection and standardization of all articles purchased by the Colombian government. His department was formed under the plan proposed by the American Commission which in 1924 under Prof. Kemmerer of Princeton University revised the entire business and banking administration of the Government of the Republic of Colombia. This included the establishment of a Federal Reserve Bank system modelled after that of the United States.

Mr. Gamboa spoke very interestingly about the trouble of getting paper to Bogota. Between the Colombian coast and Bogota is only 700 to 800 miles, but merchandise arriving in the Colombian ports must be carried up the Magdelena river by lighters, unloaded and carried bodily around rapids and then again by steamer finally finishing its trip by a rail journey from the head of navigation to Bogota which is 7,500 feet above sea level. This makes the freight charges from $100 to $200 a ton. A deep channel in the river now being cut and the construction of a modern railroad and auto road will lower these charges soon.

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He must have sales ability as his work will necessitate his calling upon Printers, Lithographers, and large users of Paper.

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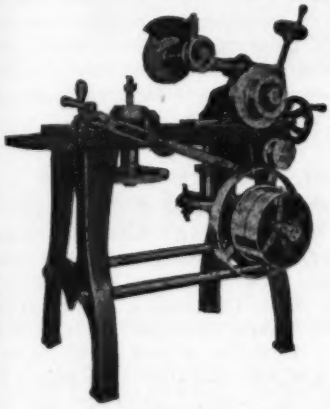
Most Every Paper Mill Has Koegel Equipment

Over 800

Standard Koegel Patent Universal Slitter and Circular Knife Grinders are in the paper and pulp mills of the United States and Canada. What greater evidence could be offered for the universal service this grinder renders?



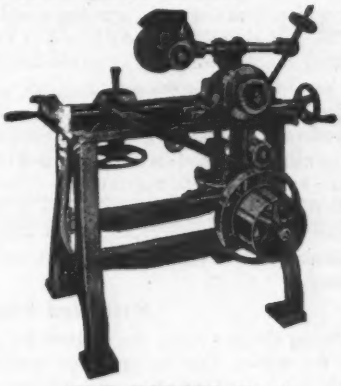
THE STANDARD
Capacity—8½-inch Diam. Slitters

Specifications: Floor space, 27" x 42"; speed of spindle, 55 revolutions; driving pulley, 9"x2½"—speed, 400 revolutions; emery wheel, 7"x½"—speed, 3,000 revolutions; weight, about 425 lbs.

For Greater Capacity

The Koegel No. 4 Patent Universal Slitter and Circular Knife Grinder is built for Slitters up to 16" in diameter. In mills where larger diameter knives and slitters are used, 150 are in service.

Here are the specifications: Floor space, 32"x52"; speed of spindle, 55 revolutions; driving pulley, 10"x2½"—speed, 400 revolutions; emery wheel, 8"x½"—speed, 3,000 revolutions; weight, about 525 lbs.



THE KOEGEL No. 4
Capacity—16-inch Diam. Slitters

CHAS. KOEGEL'S SONS, Inc.

Slitters and Specialties

HOLYOKE MASSACHUSETTS

GOOD RAGS
FOR PAPER MILLS

NEW CUTTINGS

THE LESHNER PAPER STOCK CO.

INCORPORATED

HAMILTON, OHIO

BRANCH—CLEVELAND, OHIO

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, May 18, 1927.

Although trading in the local paper market has quietened down somewhat, demand for the various grades is about normal for the time of the year. There are a fair number of inquiries in the market for future business and prices generally are holding very steady. Sales forces of the leading paper houses report that there is no decided slump in business so far and are optimistic over the immediate future of the market.

Conditions in the news print industry are fairly satisfactory. According to statistics prepared by the News Print Service Bureau, the domestic news print output during April amounted to 87.2 per cent of rated capacity and the Canadian mills operated at 85.4 per cent. Stocks of news print paper at United States mills totaled 24,105 tons at the end of April and at Canadian mills 26,389 tons, making a combined total of 50,494 tons, which was equivalent to 3.8 days' average production.

Steadiness continues ot prevail in the paper board market. Production is proceeding slightly ahead of consumption, and with accumulations limited, prices are steady to firm. Demand for fine paper has fallen off imperceptibly. The position of the market, however, is sound, and the schedule is being maintained, in most instances. The coarse paper market continues to exhibit a strong tendency, and wrapping paper, bags, and specialties are in good request.

Mechanical Pulp

During the past week, the demand for ground wood was normal for the season. Due to favorable weather, production has been fairly heavy and supplies are sufficient to take care of current requirements. Quotations remain unchanged and the market has not been affected so far by the action of the Norwegian and Swedish mills in curtailing production.

Chemical Pulp

No radical changes were recorded in the chemical pulp market during the past week. The market remains fairly steady and previous quotations are generally being maintained. Attracted by the easier prices which have prevailed of late, it is reported that some good sized orders for future delivery have been transacted. A moderate volume of inquiries are going around and immediate prospects for the industry are encouraging.

Old Rope and Bagging

Demand for both domestic and foreign old rope is rather light at present. Prices remain unchanged, however, and there is little talk of concessions. There has been a slight improvement in the request for the various grades of bagging. Quotations are being maintained at the previously reported levels.

Rags

The paper mills are said to be taking more interest in domestic rags and it is reported that some good sized orders have been booked during the last few weeks. The market for domestic rags remains fairly steady and shading is infrequent. The foreign rag market is rather lifeless but the situation is expected to improve in the near future, in the opinion of some authorities on the market.

Waste Paper

While the consumption of paper stock is reported to be showing signs of improvement, there have been very few new developments in the market. Kraft and book stock, however, continue in excellent request, and offerings are not in excess of requirements. The position of all the other grades is unchanged although a more active market is looked for in the near future by several of the more optimistic authorities.

Twine

The twine market is in an excellent position for the time of the year. The demand for the various grades is being maintained in an excellent manner, and the immediate outlook is quite promising. The recently advanced prices for cotton twines are holding up very well and prominent members of the industry are looking forward to the future with confidence.

Lowell Paper Tube Corp. To Expand

LOWELL, Mass., May 17, 1927.—In order to make provisions for expansion of business, the Lowell Paper Tube Corporation has purchased the building of the Lawrence Manufacturing Company in Race street, which was formerly used by the Lawrence corporation as a paper box shop. The purchase was made through Marden & Murphy. For several years past, the Lowell Paper Tube Corporation was in the Middlesex yard in Warren street.

Need for additional space was found by G. W. Blunt White, who has been managing the business during the past several months. In order to secure such space he took advantage of the opportunity to purchase the Lawrence Manufacturing Corporation building which will provide a floor space of 37,500 square feet. This is approximately twice the size of the present Warren street plant of the Lowell Paper Tube Corporation.

The Lawrence Mfg. building is a three-story, brick, heavy construction building, 240x50 feet, and extends from Hall to Perkins streets in Race street. The lot comprises about 40,000 square feet of land. The assessed value has been about $28,000.

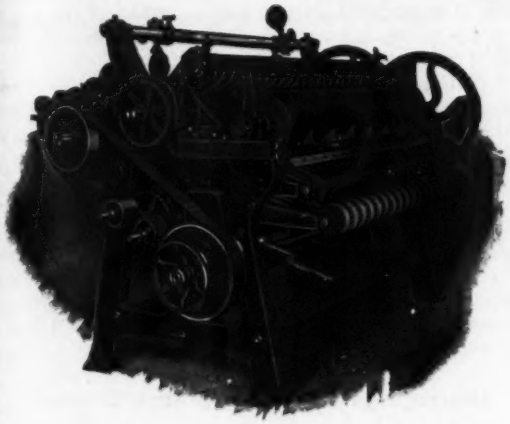
Mr. White expects to take immediate possession, prepare the building for his industry by such alterations as may be necessary and move there in a short time. He divides his time between Lowell and Mystic, Conn., where he is managing the Climax Tube Corporation, a branch of the Lowell industry.

Transfer Business From Norman Division

[FROM OUP REGULAR CORRESPONDENT]

HOLYOKE, Mass., May 17, 1927.—Announcement was made this week that the business of the Norman and Holyoke Divisions of the American Writing Paper Company would be for the present transferred to other divisions for reasons of economy and other advantages. This does not mean either that the mills will be closed for any great length of time or that they are to be sold. It is in accord with the announced policy of the company to fill its orders at the best mills possible with as little waste as possible in running mills on part time or partly manned. When conditions warrant this process of combining orders into divisions is likely to continue it is said. When orders are increased sufficiently the divisions will be reopened.

Paper Cutters
Single, Duplex and Diagonal



CUTTER KNIVES PATENT TOP SLITTER

HAMBLET MACHINE CO.
LAWRENCE MASS.

WARNING

Schopper-Riegler Beating Tester

IT IS OUR INTENTION TO ENFORCE OUR RIGHTS STRICTLY AGAINST ALL INFRINGERS OF THE RIEGLER PATENT. USERS OF INFRINGING PULP TESTERS ARE GUILTY OF INFRINGEMENT EQUALLY WITH THE MANUFACTURERS.

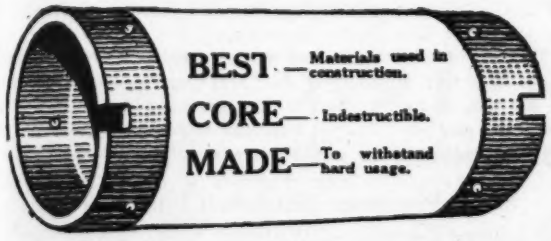
FOREIGN PAPER MILLS, INC.
72 DUANE STREET NEW YORK

Sole Distributors for:

S-C-H-O-P-P-E-R P-A-P-E-R T-E-S-T-I-N-G I-N-S-T-R-U-M-E-N-T-S

SHIPPING INSURANCE
The Use of
ELIXMAN CORES
protects your rolls and insures their delivery to your customer in perfect condition. They eliminate claims for damages.

SHIPPING INSURANCE



Your two sources of supply are

Canadian Elixman Company
HAMILTON, ONTARIO

Elixman Paper Core Company
CORINTH, N. Y.

WOODPULP AGENTS

PRICE & PIERCE, Ltd.,

17 EAST 42ND ST.,
NEW YORK

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, May 18, 1927.

Conditions in the local chemical market remain favorable. Heavy shipments are still being made by the manufacturers against standing contracts and with surplus stocks generally limited, prices remain steady to firm. Inquiries for future business are being received in satisfactory volume and prospects of the prevailing activity being continued for some time are bright.

BLANC FIXE.—The position of the blanc fixe market is sound and a good demand is reported for both the pulp and the powder for prompt shipment. Prices remained unchanged at the previously recorded basis. The pulp is quoted at $60 per ton, in bulk, and the powder at from 4 cents to 4¼ cents a pound, in barrels, at works.

BLEACHING POWDER.—Steadiness prevails in the bleaching powder market. Contract withdrawals continue to move into consumption in a satisfactory manner. Prices are holding up very well, in most instances. Bleaching powder is selling at from $2 to $2.40 per 100 pounds, in large drums, at works, according to quantity.

CASEIN.—Most of the business transacted in the casein market during the past week was along routine lines. The paper mills are reported to be only purchasing for immediate requirements at the present time. Prices are steady to firm. Domestic casein is quoted at from 18½ cents to 19½ cents a pound, while imported casein is selling at from 18½ cents to 19 cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Consumption of caustic soda is being maintained in an excellent manner. Large contract shipments continue to go forward and the movement for May is expected to compare favorably with last month's record. Caustic soda is offered at from $3 to $3.10 per 100 pounds, in large drums, at works. Spot car lots are quoted at $3.20 per 100 pounds.

CHINA CLAY.—The china clay market is practically unchanged. Contract withdrawals continue to go forward at a steady pace. Quotations on both the foreign and domestic product are being maintained at the existing schedule. The price of imported china clay ranges from $15 to $25 a ton, in bulk, ship side. Domestic washed clay is selling at from $8 to $9 a ton, at mine, and pulverized at $10 a ton.

CHLORINE.—Production of chlorine is proceeding in ample volume to take care of the prevailing request. The market for this product continues to exhibit a strong undertone. Prices remain unaltered. The quotation on chlorine is 4 cents a pound, in tanks, or multi-unit cars, at works, on contract orders. The spot price is from 4¼ cents to 4½ cents a pound.

ROSIN.—No radical changes were recorded in the rosin market during the past week. In some quarters the opinion is being expressed that the demand for this product is picking up. At the naval stores, the grades of gum rosin used in the paper mills are offered at from $10 to $10.75 per 280 pounds, ex dock, in barrels. Wood rosin remains unchanged at $9.50 per 280 pounds, at southern shipping points.

SALT CAKE.—There has been a slight falling off in the demand for salt cake, more especially from the southern states, but this condition is believed to be only temporary. Prices remain fairly steady, although there have been unconfirmed reports of shading around. Salt cake is still selling at from $18 to $19 a ton, in bulk, at works. Chrome salt cake is offered at from $14 to $15 a ton, in bulk, at works.

SODA ASH.—The soda ash market is in a sound position and prices are holding up very well, in most instances. Offerings of soda ash are sufficient to take care of the current consumption. Inquiries for future business are fairly numerous. Contract quotations, in car lots, at works, are as follows: in bags, $1.32½, and in barrels, $1.57½.

STARCH.—Trading in the starch market was well up to average during the past week. Consumption is being maintained at a normal rate while production has been proceeding in good volume. Prices remain steady at the recently quoted basis. Special paper makers' starch is quoted at $3.07 per 100 pounds, in bags, and at $3.24 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Demand for sulphate of alumina is excellent for the time of the year. Supplies on contract are moving at a steady pace and prices are practically unchanged. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.50 per 100 pounds, in bags, at works, in car lots. The iron free is selling at from $2 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—The sulphur market continues to exhibit strength. Paper manufacturers are reported to be taking on sulphur in routine volume, while a satisfactory amount of new business is being transacted. Prices remain unaltered. Sulphur is quoted at from $18 to $19 a ton, in bulk, at mine, on contract orders. The spot quotation is $20 per ton.

TALC.—There were no changes of importance reported in the talc market during the past week. The prevailing demand is seasonal and prices are steady and unaltered. Instances of shading are very scarce. Domestic talc is quoted at from $16 to $18 a ton, at eastern mines, and French talc is selling at from $18 to $22 a ton, ship side.

Hearing on Proposed Turpentine Standard

A public hearing to discuss the proposed standard for "Sulphate Wood Turpentine," for which no standard is established by the Naval Stores Act, will be held at the office of the Food, Drug and Insecticide Administration, United States Department of Agriculture, 216-13th street, S. W. Washington, D. C., on August 15, 1927, at 10:00 a. m., is announced by the Secretary of Agriculture.

The text of the notice follows: "Pursuant to the authority vested in the Secretary of Agriculture by the Naval Stores Act of March 3, 1923, notice is hereby given to the trade of the intention to establish a United States standard for naval stores for which no standard has been established. This standard is for Sulphate Wood Turpentine. Under this standard 'Sulphate Wood Turpentine' means wood turpentine obtained in cooking resinous wood by the sulphate process, and subsequently so refined that it has a characteristic but not offensive odor, contains not more than 0.02 per cent of sulphur, and will not tarnish a bright strip of copper boiled in it for one-half hour.

"Oral statements or arguments may be made at this hearing or written statements or arguments may be submitted on or prior to the date of this hearing."

John H. Carlo & Sons Buy Building

NEWARK, N. J., May 16, 1927.—The four story and basement brick industrial building at 28-32 Division place has been purchased by John H. Carlo & Sons from Charles F. Hummell, of Bloomfield. The sale was negotiated by the industrial department of Louis Schlesinger, Inc. Mr. Hummell recently purchased the property from Mrs. Mollie Zimetbaum.

The property just purchased has a frontage of 70 feet and a depth of 89 feet. It will give the Carlo Company a total frontage of 100 feet. John H. Carlo & Sons are the largest waste paper dealers in Newark. The purchase was to provide increased space for their business, now carried on at 26 Division place.

Pyrometer Instruction Bulletin

The Bristol Company, of Waterbury, Conn., has just issued a new Pyrometer Instruction Bulletin which should prove very useful to users of Pyrometers and particularly Bristol Pyrometers.

Illustrated profusely, the booklet contains invaluable information on the installation and care of Pyrometers and will enable users of Bristol's Thermo-Electric Pyrometers to secure the greatest efficiency and satisfaction. Further details may be obtained through any of the many Bristol Company's Offices.

Cotton and Paper Rolls
Super Calenders
Friction Calenders
Embossing Calenders
Hydraulic Presses and Pumps

Successors to the Granger Foundry & Machine Co.

The Textile-Finishing Machinery Company
PROVIDENCE, R. I.

TRADE MARK

B

Registered

DIAMOND B SPLICING TISSUE

HIGHEST QUALITY
SPECIALLY MADE FOR THE PAPER TRADE
PRICES ON APPLICATION

BEMIS ASSOCIATES INC.
WATERTOWN, MASS.

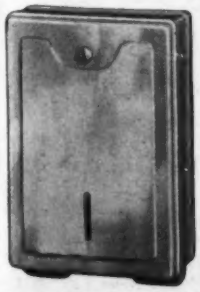
Clay
300 tons daily
AMERICAN MADE FOR AMERICAN TRADE

Some portion of our clay production is *pulverized*. That part of it which is *pulverized* is, as far as we know, the only *pulverized clay* which is washed and refined before being pulverized. This insures greater freedom from impurities and an exceedingly uniform product.

Prices of M-E pulverized clay may surprise you even considering this additional treatment.

Let us submit sample and quote you.

THE
MINER-EDGAR CO.
110 William St.,
NEW YORK



GRIFFITH-HOPE
Dispensing Cabinets
AND
Fixtures
ARE
The STANDARD of the PAPER TRADE
For Towels, Toilet, Napkins, Etc.

GRIFFITH-HOPE CO., West Allis, Wisc.

Market Quotations

Quoted by Hepburn & Co., 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Advance Bag & Paper, 7s 1943	101	103*
A. P. W. Pulp & Power, 7s 1945	101	102
American Writing Paper, 6s 1947	79	82
Bastrap Pulp & Paper, 6½s 1940	100	103
British Columbia Pulp & Paper, 6s 1950	85	90*
Beaver Products Corp., 7½s 1942	106	109
Berkshire Hills Paper, 8s 1941	60	80
Brown Paper Co., 1st 5½s 1946	94	98
Bryant Paper Co., 6s 1942	100½	102
Cape Breton Pulp & Paper, 6s 1932	101	103
Central Paper Serial b, 6½s 1942	89	...
Champion Coated Paper, 6s 1926 to 1932	98	...
Champion Fibre, 8s 1930	100	...
Champion Paper Corp'n, 1st 6s 1945	94	97
Continental Paper Products, 6½s 1943	88	91½
Cornell Wood Prod., 7½s 1937	100	104*
Crown Willamette Paper, 6s 1951	97	101
Donnaconna Paper, 6s 1940	100½	102
Dells Paper & Pulp Serial, 6s 1926-38	*95	...
Eastern Mfg. Co., 7s 1938	90	93
Eddy Paper, 7½s 1931	102	104
Escanaba Paper Serial, 6s 1926-39	93	95
Fiber Fibre Serial, 7s 1926-39	95	...
Fort Orange Paper, 7s 1942	99	100*
Fox River Paper, 7s 1931	99	...
Gair Co. (The Robt.), 7s 1937	104	106
Gilbert Paper Co., 6½s 1926-29	89	...
Hammermill Paper, 6s 1939	100	103*
Hoberg Paper & Fibre, 7s 1937	94½	96
Itaska Paper & Prairie River Power, J+5½s 1926-38	94	96*
Itaska Paper 1st, 6s 1933-38	96	98*
Kalamazoo Veg. Parchment, 6s 1938	98	...
Marinette & Menominee, 7½s 1936	101	...
Mead Pulp & Paper, 5% Notes, 1927-37	90	95
Menasha Printing & Carton, 6½s 1939	99½	...
Mengel Company, 7s 1926 to 1934	100*	102
Monroe Paper Products, 7½s 1932	96	...
Munising Paper, 6s 1927-36	96	100
Nekoosa Edwards, 1st Ref. 6s 1928 to 1942	96	99*
Orono Pulp & Paper, 6s 1943	98	...
Orono Pulp & Paper, 5s 1941	94	...
Oswego Falls Corp., 6s 1941	98	100*
Oxford Paper, 6s 1947	100	...
Paepcke Paper Mills, 7s 1930	99	None
Parsons Pulp & Lumber, 7s 1928	97	...
Parker Young Co., 6½s 1944	95	99
Paterson Parchment Paper, 6s 1938	100½	102
Penobscot Chemical Fibre, 6s 1942	98	...
Poland Paper, 7s 1930	98	...
Port Alfred Pulp, 6½s 1943	*96	...
Queens City Paper, 7s 1932	95	100*
Richardson Co., 6s 1938	100	...
Spanish River Pulp & Paper, 8s 1941	106	110
Stevens & Thompson Paper, 6s 1942	91	94
St. Anne Paper, 6½s 1946	95½	98*
St. Croix Paper, 5s 1926-37	95	98*
St. Regis Paper Serial, 6½s 1926-35	98½	...
Tait Paper & Color Industries, 6s 1934	85	93
Taggart Bros. Co., 6s 1944	94	97
Ticonderoga Pulp & Paper, 5s 1930	95	98
Ticonderoga Pulp & Paper, 6s 1940	98½	100*
Warren (The S. D.) Company, 6s 1945	98	101
Wotab Paper, 6½s 1943	102	...
Westfield River Paper, 7s 1926-43	Wanted	...
Whitaker Paper, 7s 1942	106	108
Witmer-Parsons Pulp & Lbr. (Units)	63	70

STOCKS	BID	ASKED
Advance Bag & Paper, 8% Pfd.	97	100*
Am. Tissue Mills, 7% Pfd.	95	100
British Columbia P. & P., Pfd.	65	70
Brompton Pulp & Paper, 8% Pfd.	93	98*
Brown Corpn., 7% Pfd.	97	100*
Champion Fibre, 7% Pfd.	99	103*
Diem & Wing, 7% Cum. Pfd.	87	...
Donnaconna Paper, Com.	58	...
Donnaconna Paper, Pfd.	95	100
Eastern Mfg. Co., 1st Pfd.	34	37
Great Northern Paper (new)	60	70
Hammermill Paper, 7% Pfd.	105	110
Hinde & Dauch, Com.	135	...
Hinde & Dauch, Pfd.	100	...
Holyoke Card & Paper	150	None
Marathon Paper Mills, Com.	125	...
Midwest Box Co., Pfd. 8%	80	85
Midwest Box Co., Pfd. 6%	55	65
Louis De Jonge Co., 7% Pfd.	93	96
Oxford Papers, Com.	102	...
Oxford Paper Co., Pfd.	100	105
Penobscot Chemical Fibre, Com.	65	75*
Richardson Co., 7% Pfd.	104	...
Rubberoid Company	73	77
Seaman Container, Class B (par $1)	1	None Off.
Seaman Paper Co.	Wanted	None Off.
St. Croix Paper	150	170
St. Regis Paper Co., 7% Cum. Pfd.	97	100
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp and Paper, Com.	58	63
Wese Virginia Pulp and Paper, Pfd.	97	102
Whittaker Paper, 7% Cum. Pfd.	97	103

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.25	@ —
Rolls, transient	3.25	@ 3.50
Sheets	3.65	@ 3.85
Side Runs	3.00	@ 3.75
Book, Cased—		
S. & S. C.	6.50	@ 8.00
M. F.	6.25	@ 7.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream—		
White No. 1	.80	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.75	@ 5.25
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Boards—per ton—		
News	42.50	@45.00
Straw	57.50	@60.00
Chip	40.00	@42.50
Binders' Boards	65.00	@70.00
Sgl. Mla. Ll. Chip	52.50	@55.00
Wood Pulp	67.50	@72.50
Container	60.00	@65.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	32.00	@34.00
Dry	34.00	@36.00
(F. o. b. Mill)		
No. 1 Domestic	27.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.50	@ 4.50
Easy Bleaching	3.05	@ 3.25
No. 1 strong unbleached	2.60	@ 2.85
Mitscherlich unbleached	2.75	@ 3.40
No. 2 strong unbleached	2.50	@ 2.70
No. 1 Kraft	2.70	@ 2.90
Sulphate—		
Bleached	3.75	@ 4.00
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	3.00	@ 3.25
News Sulphite	2.50	@ 2.70
Mitscherlich	3.25	@ 3.75
Kraft (Domestic)	2.70	@ 3.40
Soda Bleached	3.75	@ 4.00
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.50	@ 1.85

Domestic Rags

New Rags

Prices to Mill f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	11.75	@12.25
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.25	@ 7.75
New Unbleached	10.75	@11.25
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	7.25	@ 7.75
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.50	@ 5.25
Pink Corset Cuttings	9.50	@10.00
O. D. Khaki Cuttings	5.25	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.75	@ 6.50
Miscellaneous	4.75	@ 5.25
White, No. 2—		
Repacked	3.25	@ 3.75
Miscellaneous	2.75	@ 3.00
St. Soiled, White	2.50	@ 2.75
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.65	@ 1.75
No. 1	1.65	@ 1.75
No. 2	1.35	@ 1.45
No. 3	1.25	@ 1.35
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.75	@ 8.50
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
New Mixed Cuttings	3.00	@ 3.50
New Dark Cuttings	2.75	@ 3.25
No. 1 White Linens	7.00	@ 7.75
No. 2 White Linens	5.25	@ 6.00
No. 3 White Linens	4.00	@ 4.50
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med Light Prints	1.85	@ 2.10
Dutch Blue Cottons	2.25	@ 2.50
German Blue Linens	2.50	@ 2.75
German Blue Cottons	2.00	@ 2.25
Checks and Blues	1.75	@ 2.00
Lindsay Garments	1.75	@ 1.85
Dark Cottons	1.60	@ 1.65
Shoppery	1.50	@ 1.60
French Blues	2.25	@ 2.50

Old Rope and Bagging

Prices to Mill f. o. b. N. Y.

Gunny No. 1—		
Foreign	1.80	@ 1.90
Domestic	1.90	@ 2.00
Wool Tares, light	1.60	@ 1.70
Wool Tares, heavy	1.65	@ 1.75
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.50	@ 1.65
Manila Rope—		
Foreign	3.75	@ 4.00
New Burlap Cut	3.00	@ 3.25
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.40	@ 3.60
Hard, White, No. 2	3.00	@ 3.15
Soft, White, No. 1	2.80	@ 3.00
Flat Stock—		
Stitchless	1.25	@ 1.35
Overissue Mag.	1.25	@ 1.35
Solid Flat Book	1.15	@ 1.25
Crumpled No. 1	.80	@ .90
Solid Book Ledger	1.90	@ 2.10
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.45	@ .55
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.65	@ .75
Container Board	.50	@ .55
Bogus Wrapper	.70	@ .80
Old Kraft Machine Compressed bales	2.00	@ 2.10
News—		
No. 1 White News	1.50	@ 1.60
Strictly Overissue	.65	@ .75
Strictly Folded	.47½	@ .52½
No. 1 Mixed Paper	.37½	@ .42
Common Paper	.25	@ .30

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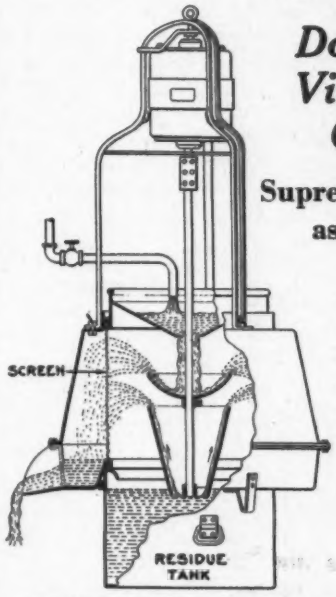

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BLEACHED AND UNBLEACHED

Twines

F. o. b. Mill

Cotton—			
No. 1	.28	@	.29
No. 2	.26	@	.27
No. 3	.24	@	.25
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.20	@	.22
Tube Rope—			
4-ply and larger	.18	@	.19
Fine Tube Yarn—			
5-ply and larger	.23	@	.27
4-ply	.24	@	.28
3-ply	.26	@	.30
Unfinished India—			
Basis	.16	@	.17
Paper Makers Twine			
Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.19
Jute Rope	.21	@	.23
Ameri. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.18	@	.20
No. 2 Basis	.16	@	.18
Sisal Lath Yarn—			
No. 1	.16	@	.18
No. 2	.14	@	.16
Manila Rope	.24	@	.26

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05¼	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06¾
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.05¾	@	.06¼
Southern Kraft	.04½	@	.05
No. 2 Kraft	.05	@	.05¼
Wood Tag Boards	.04¼	@	.06¾
Sulphite Screenings	.03	@	.03¾
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 sheet	.07¼	@	.07½
Boards, per ton— (Delivered Central Territory—			
Plain Chip	45.00	@	47.50
Solid News	47.50	@	—
Manila Line Chip	55.00	@	57.50
Container Lined— (Delivered Central Territory)—			
85 Test	65.00	@	70.00
100 Test	70.00	@	75.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.60	@	3.70
White Env. Cuttings	3.60	@	3.70
No. 1 Soft Shavings	2.90	@	3.00
No. 1 Mixed	1.35	@	1.45
No. 2 Mixed	1.05	@	1.10
Ledger & Writings	1.45	@	1.60
Solid Books	1.20	@	1.30
Blanks	1.65	@	1.75
Krafts	1.80	@	1.90
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.55	@	1.65
Print Manila	.80	@	.90
Folded News (overissue)	.65	@	.75
Old Newspapers—			
No. 1	.55	@	.60
No. 2	.50	@	.55
Mixed Papers—			
No. 1	.55	@	.60
Roofing Stocks— F. o. b. Chicago, net cash			
No. 1	30.00	@	—
No. 2	28.00	@	—

BOSTON

Paper

F. o. b. Mill

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05¾	@	.06½
No. 2 Kraft	.05	@	.05¾
Common Bogus	.02¼	@	.02½
Delivered New England points			
Straw Board, rolls .009			57.50
Straw Board in Sheets, basis 35s to 70s			53.50
Filled News Board			47.50
Chip Board			45.00
Single Manila Pulp lined board	55.00	@	60.00
Single White, patent coated board bender	75.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards (F. o. b. Mills)	70.00	@	75.00
Tarred Felts— Regular, carload lots	65.00	@	—

Old Papers

F. o. b. Boston

Shavings—			
No. 1 Hard White	3.25	@	3.75
White Blank News	1.40	@	1.50
Manila Env. Cuttings	2.00	@	2.25
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	.03	@	.03¼
No. 1 Soft White	2.75	@	3.00
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.50	@	—
No. 1 Books, Heavy	1.10	@	1.20
No. 1 Books, Light	—	@	1.15
No. 1 New Manila	2.25	@	2.50
No. 1 Old Manila	1.40	@	1.60
Print Manila	.70	@	.80
Old Kraft	1.65	@	1.80
Overissue News	.55	@	.60
Old Newspapers	.45	@	.50
No. 1 Mixed Paper	.45	@	.50
Box Board, Chip	.45	@	.60

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	1.50	@	1.75
Domestic	1.75	@	1.87½
Manila Rope—			
Foreign	3.50	@	3.75
Domestic	4.00	@	4.50
Mixed Rope	1.05	@	1.15
Scrap burlaps	1.35	@	—
Wool Tares, heavy	1.50	@	1.65
Mixed Strings	1.00	@	1.10
New Burlap Cutting	2.15	@	2.25

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.11¼	@	.11½
Silesias, No. 1	.07	@	.07½
New Unbleached	.10	@	.10½
Fancy	.05¾	@	.06
Washable	.04½	@	—
Cottons—According to Grades—Blue—			
Blue Overalls	—	@	.07
New Black, soft	.04	@	.04¼
Khaki Cuttings	.05	@	.05½
Corduroy	.03	@	.03½
New Canvas	.09	@	.10

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1—			
Repacked	5.00	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Thirds and Blues—			
Repacked	2.12½	@	2.37½
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.37½	@	—
No. 2	1.25	@	—
No. 3	1.12½	@	—
No. 4	1.00	@	—

PHILADELPHIA

Paper

F. o. b. Mill

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06¾	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila, No. 2	.04	@	.04½
No. 2 Kraft	.05	@	.05¾
No. 1 Kraft	.06	@	.06¾
Common Bogus	.02¾	@	—
Straw Board	60.00	@	65.00
News Board	45.00	@	50.00
Chip Board	40.00	@	42.00
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	85.00	@	90.00
No. 2, per ton	70.00	@	75.00
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	66.00	@	58.00
Slaters	70.00	@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply	2.10	@	2.15
No. 1 Mixed Paper	.65	@	.70

Domestic Rags (New)

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.11½	@	.12
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable	.04	@	.04½
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	.08
New Blue	.03½	@	.04
New Black Soft	.05½	@	.06
New Light Seconds	.03	@	.03½
Khaki Cuttings	.04½	@	.05
Corduroy	.03	@	.03¾
New Canvas	.08	@	.09
New Black Mixed	.05	@	.05½

Bagging

F. o. b. Phila

Gunny, No. 1—			
Foreign	1.75	@	2.00
Domestic	1.75	@	2.00
Manila Rope	4.25	@	4.50
Sisal Rope	1.25	@	2.00
Mixed Rope	1.25	@	1.50
Scrap Burlaps	1.75	@	2.00
Wool Tares, heavy	2.00	@	2.25
Mixed Strings	1.50	@	1.75
No. 1, New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.25	@	2.50

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.80	@	2.90
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.90	@	2.00
Writing Paper	1.65	@	1.75
No. 1 Books, heavy	1.15	@	1.20
No. 2 Books, light	.80	@	.85
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	1.00	@	1.10
Container Manila	.75	@	.80
Old Kraft	2.00	@	2.20
Common Paper	.40	@	.50
No. 1 Mixed Paper	.50	@	.60
Straw Board, Chip	.60	@	.65
Binders Board, Chip	.60	@	.65
Overissue News	.75	@	.80
Old Newspaper	.50	@	.60

Domestic Rags (Old)

White, No. 1—			
Repacked	5.00	@	5.25
Miscellaneous	4.75	@	5.00
White, No. 2—			
Repacked	.03½	@	.04
Miscellaneous	.02	@	.02¼
Thirds and Blues—			
Repacked	2.50	@	2.75
Miscellaneous	1.75	@	2.00
Black Stockings	3.25	@	3.50
Roofing Stock—			
No. 1	1.55	@	1.65
No. 2	1.40	@	1.50
No. 3	1.25	@	1.35
No. 4	1.20	@	1.30
No. 5A	.90	@	1.00
B	.80	@	.90
C.	.80	@	.90

TORONTO

Paper

F. o. b. Mill

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¼	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (Carloads)	3.25	@	—
Sheet (carload)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carLoads	7.75	@	—
No. 2 M. F. (carloads	7.50	@	—
No. 3 M. F. (carloads)	7.25	@	—
No. 1 S. C. (carloads)	8.25	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.75	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.85	@	—
White Rap	5.25	@	—
"B" Manila	5.65	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.20	@	—
M. G.	7.35	@	—

Pulp

(F. o. b. Mill)

Ground wood	30.00	@	31.00
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade	55.00	@	60.00
Sulphite, bleached	78.00	@	80.00
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.50	@	—
Soft White Book Shavings	3.00	@	—
White Blk. News	1.40	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers	1.40	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.47½	@	.52½
No. 1 Mixed Paper	.37½	@	.42

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.12	@	.12½
Fancy Shirt Cuttings	.06	@	.06¼